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THE GENERAL DEATH-RATE OF LARGE AMERICAN CITIES, 1871-1904.

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For a variety of purposes the general death-rate of cities is a necessary aid in the accurate determination of the conditions and tendencies of social life. The general death-rate, however, is so simple a *factor*, and so easily arrived at upon the basis of even very crude data, that few statistical standards of measurement have been more generally misused and perverted to false objects and purposes. The danger of misuse lies in the very simplicity of the calculation and in the great practical usefulness of the rate itself. Given an even approximate estimate of the population, or a fair guess as to the probable number of people in any given community, and any kind of an official return as to the number of deaths during a given year, the rate is easily calculated by any one familiar with elementary arithmetic. It has thus come about that the most erroneous ideas have gained currency, and that false views as to the comparative healthfulness or sanitary progress of states and cities, or of

the past and the present, have been widely disseminated, often upon the most slender basis of actual facts.

It is the purpose of this paper to point out some of the principal sources of error in the use of the general death-rate and the necessity for attention to the underlying elements of the problem. A further object is to point out the very limited value of the crude death-rate for the purpose of national or international comparisons to establish the relative healthfulness of different localities or their comparative sanitary progress. The present state of American vital statistics is not very far from deplorable. While an effort has been made in the direction of gathering the data for recent years through the medium of the Census Office,* which effort is certainly to be commended, and in conformity to a broad policy of national welfare, there is a still greater need of bringing together the vital records of the past, properly classified and arranged to establish with reasonable accuracy the true facts of our progress in public health, during at least the last thirty years. We also have nothing to compare, not even in the health reports of the cities of New York, Boston, Philadelphia, Chicago, and other large cities, with the thoroughly scientific and practically useful reports prepared by the medical officers of health of the large cities of England. A critical analysis of the mortality is, as a rule, wanting, and crude death-rates are used exclusively where specific death-rates are required. In not one of the reports of American cities are specific mortality rates calculated with due regard to sex, race, age, occupation, etc., and most sweeping conclusions are arrived at and recommendations are made upon the basis of the crude death-rate which by no means warrants such a procedure.

While the general death-rate is of very limited value for the purpose of comparison in the case of different localities,

* For a comprehensive review of the Census vital statistics, by the writer, see the *Publications of the American Statistical Association*, No. 60, Vol. VIII., 1902.

it is, I am satisfied, after a very careful investigation and much experience, of quite considerable value in making local comparison of the present health conditions with the past. If the comparison is limited to a reasonable period of years,—say, for illustration, two decades,—even a brief consideration of the elements of the population would easily establish whether there have been fundamental and important changes which would make such a comparison vicious or misleading. Nothing, however, is more likely to convince even the most sceptical of the practical value of the general death-rate as a means to establish the *tendency* towards better health conditions, and a lower rate of mortality, than to trace with patience and care the curves of death-rates for a large number of cities through a period of, say, thirty years. By this method it is clearly brought out that there is a considerable degree of similarity in the tendency of the death-rates of our different cities, however widely separated, and, when the average rate has been high, it has, as a rule, been high in the large majority of localities, and, when the average rate has been low, it has, as a rule, been low in most of the communities taken into account. It is, therefore, safe to hold that there must be underlying laws which, to a considerable extent, govern human health and mortality throughout the country, and the discovery of these laws is a public duty which emphasizes the need of a more scientific study of vital statistics, and in particular the relation of mortality to local causes favorable or unfavorable to longevity. It is nothing to our credit as a civilized nation that upon this question of national health we should have so meagre a basis of fact and so untrustworthy a basis or groundwork for social legislation as is at present the case. In the mean time the following data will serve a useful public purpose, and no doubt be found convenient by many to whom the original facts would be inaccessible.

The investigation includes all of the thirty-nine large cities

of the United States which by the last census had 100,000 or more inhabitants. For eighteen of these cities the mortality returns are complete for the years 1871–1904, and for the remainder the returns are for periods of variable length, but in each case I have included all the data which could be secured either from the official reports or by correspondence with the proper authorities. The returns have been consolidated into three tables respectively for Northern and Western cities, and for Southern cities, with distinction of color. The first of these tables includes thirty-four, while the two last are for five cities. It did not seem to me advisable to include the Southern cities with the Northern and Western cities, since the local conditions are quite different, and an average for the whole country would not be as useful and trustworthy for the particular problems under consideration.

Table A exhibits the population, mortality, and death-rate per 1,000 of Northern and Western cities. The table shows a persistent decline in the general death-rate from 23.7 in 1871 to 21.4 in 1886 and 17.2 in 1904. There are, of course, exceptions to this rule for individual years, but, taken one with another, the tendency is persistently downward. Commencing with the rate for 1871, the general death-rate at different times assumed an upward direction during eleven years, and a downward direction during twenty-two years, which it is safe to hold is fairly conclusive evidence of a distinct improvement in the health of a large majority of the cities represented in the consolidated mortality returns for the Northern and Western portions of the United States. This tendency is even more clearly illustrated in the diagram. The year of highest mortality for Northern and Western cities was 1872, while the year of lowest mortality was 1903.

TABLE A.

GENERAL DEATH-RATE OF AMERICAN CITIES, 1871–1904.

NORTHERN AND WESTERN CITIES.

Years.	Number of Cities.	Population.	Deaths.	Rate per 1,000 of Population.
1871	16	3,800,239	90,122	23.7
1872	16	3,922,805	112,731	28.7
1873	18	4,261,427	109,316	25.7
1874	19	4,430,486	104,845	23.7
1875	19	4,579,895	113,118	24.7
1876	19	4,714,563	112,929	24.0
1877	20	4,939,118	104,218	21.1
1878	21	5,232,406	105,695	20.2
1879	24	5,566,249	112,844	20.3
1880	24	5,735,326	126,141	22.0
1881	24	5,934,628	147,768	24.9
1882	24	6,143,634	151,135	24.6
1883	25	6,491,860	144,379	22.2
1884	26	6,805,848	148,874	21.9
1885	26	6,990,669	150,725	21.6
1886	27	7,415,416	158,343	21.4
1887	28	7,789,690	173,912	22.3
1888	28	8,112,079	178,610	22.0
1889	27	8,252,807	172,676	20.9
1890	31	9,121,273	196,076	21.5
1891	32	9,511,230	241,631	25.4
1892	32	9,790,201	217,210	22.2
1893	31	9,849,232	213,139	21.6
1894	30	10,072,401	199,493	19.8
1895	31	10,612,875	208,981	19.7
1896	31	10,922,957	205,933	18.9
1897	31	11,243,453	197,272	17.5
1898	31	11,574,782	200,851	17.4
1899	32	12,002,756	212,010	17.7
1900	33	12,476,986	220,989	17.7
1901	33	12,855,539	221,981	17.3
1902	33	13,247,099	221,246	16.7
1903	33	13,652,076	220,771	16.2
1904	33	14,071,828	241,437	17.2

Table B shows the consolidated mortality of the white population of Southern cities. For only two cities are the returns complete for the entire period of thirty-four years. The tendency of the rate has been persistently downward from 26.7 per 1,000 in 1871 to 20.6 in 1886 and 17.4 in 1904. Commencing with the rate for the year 1871, the general death-rate of the white population of Southern cities shows an upward direction at different times during twelve years,

and a downward direction during twenty-one years, following in this respect practically the same course as the corresponding death-rate for Northern and Western cities combined. The year of maximum mortality was 1878, due to a yellow fever epidemic, while the year of minimum mortality was, as in the case of the Northern and Western cities, 1903.

TABLE B.

GENERAL DEATH-RATE OF AMERICAN CITIES, 1871–1904.

SOUTHERN CITIES—WHITE POPULATION.

Years.	Number of Cities.	Population.	Deaths.	Rate per 1,000 of Population.
1871	2	357,071	9,533	26.7
1872	2	341,962	9,978	29.2
1873	2	388,029	10,853	28.0
1874	2	394,680	10,346	26.2
1875	2	401,446	9,660	24.1
1876	4	534,438	12,495	23.4
1877	4	587,680	13,748	23.4
1878	4	553,703	17,814	32.2
1879	4	564,677	11,972	21.2
1880	4	573,772	12,364	21.5
1881	4	587,907	13,716	23.3
1882	4	602,433	13,188	21.9
1883	4	618,281	14,557	23.5
1884	4	633,691	14,096	22.2
1885	4	649,560	13,925	21.4
1886	4	665,901	13,686	20.6
1887	4	682,733	13,484	19.8
1888	4	700,070	14,546	20.8
1889	4	717,934	14,230	19.8
1890	5	867,673	18,539	21.4
1891	5	884,322	18,293	20.7
1892	5	901,003	19,670	21.8
1893	5	918,022	18,509	20.2
1894	5	935,386	17,736	19.0
1895	5	953,103	19,141	20.1
1896	5	971,180	18,481	19.0
1897	5	989,627	17,540	17.7
1898	5	1,008,450	17,963	17.8
1899	5	1,027,659	19,582	19.1
1900	5	1,047,666	19,038	18.2
1901	5	1,067,741	19,057	17.8
1902	5	1,088,224	18,529	17.0
1903	5	1,108,778	18,688	16.9
1904	5	1,130,484	19,695	17.4

Table C exhibits the mortality of the colored population of Southern cities, corresponding to the mortality returns

for the white population. Without exception the death-rates are materially in excess of the corresponding death-rates of the white population, but there has also been in

TABLE C.

GENERAL DEATH-RATE OF AMERICAN CITIES, 1871–1904.

SOUTHERN CITIES—COLORED POPULATION.

Years.	Number of Cities.	Population.	Deaths.	Rate per 1,000 of Population.
1871	2	91,918	3,505	38.1
1872	2	86,861	3,582	41.2
1873	2	95,870	4,387	45.8
1874	2	97,920	3,853	39.3
1875	2	100,021	3,677	36.8
1876	4	169,795	6 579	38.7
1877	4	181,804	7,447	41.0
1878	4	177,586	7,434	41.9
1879	4	181,651	6,361	35.0
1880	4	185,825	6,459	34.8
1881	4	190,143	7,113	37.4
1882	4	194,562	7,304	37.5
1883	4	199,144	8,035	40.3
1884	4	203,875	7,839	38.5
1885	4	208,763	7,383	35.4
1886	4	213,815	7,042	32.9
1887	4	219,038	7,097	32.4
1888	4	224,442	7,278	32.4
1889	4	229,034	7,172	31.3
1890	5	264,524	8,966	33.9
1891	5	270,538	8,858	32.7
1892	5	276,732	9,243	33.4
1893	5	283,115	9,154	32.3
1894	5	289,694	9,062	31.3
1895	5	296,477	9,608	32.4
1896	5	303,471	9,580	31.6
1897	5	310,687	8,664	27.9
1898	5	318,133	9,302	29.2
1899	5	325,818	10,116	31.0
1900	5	333,764	10,461	31.3
1901	5	341,891	9,700	28.4
1902	5	350,272	9,811	28.0
1903	5	358,916	9,633	26.8
1904	5	367,838	10,328	28.1

this case a persistent decline in the general death-rate from 38.1 per 1,000 in 1871 to 32.9 in 1886 and 28.1 in 1904. Commencing with the rate for the year 1871, the general death-rate of the colored population of Southern cities at different times assumed an upward direction during fifteen

years and a downward direction during eighteen years, departing in this respect from the corresponding mortality of the white population of Southern cities and the general population of Northern and Western cities, the tendency of which was more distinctly towards a definite improvement. The year of maximum mortality for the colored population was 1873, while the year of minimum mortality was 1903.

The tables and diagram suggest the question as to whether the downward tendency in the American mortality rate is the result of a material improvement in the conditions of life or elements of locality, or is merely the mechanical resultant of fundamental changes in the elements of the population. These are broadly divided into permanent or unchangeable conditions of climate and physiographic features, such as latitude, longitude, altitude, etc. and the conditions of life proper, such as housing, drainage, sewerage, water supply, etc. Into the last group enter also personal habits, such as intemperance, diet, exercise, etc. The elements of the population proper, such as sex, age, race, and nativity distribution, are profoundly affected by a decline in the birth-rate, by migratory tendencies, from the country to the cities and *vice versa*, and perhaps most by the considerable influx of foreign immigrants, chiefly of ages 15 to 45. How far any one or all of these factors enter into the decline of the general death-rate is a most important problem, for the decline may be more apparent, if not entirely so, than a real decrease in the actual mortality and a consequent improvement in longevity. Again, the decrease in the mortality may be due entirely to a decline in the death-rate of certain large age groups, such as children under five years or young persons, ages 5 to 15, while there may have been at the same time a corresponding increase in the death-rate at more advanced ages. Therefore, to avoid misleading conclusions and erroneous interpretations of the decline in the general death-rate, it is necessary to examine with patience and care into the individual factors entering into the prob-

lem, but such an investigation is a most difficult one in the present state of our vital statistics. For the time being, this inquiry is limited to the general death-rate of individual cities, for which, in each case, the elements of population and locality are given in detail. Some time in the future I hope to extend this analysis to the principal causes of death and to the mortality at different periods of life, but for the present such an extensive investigation is out of the question.

In this investigation I have taken into account twenty distinct elements of locality and population. These are, in the order of their arrangement, size of city, density of population, latitude, longitude, elevation, rate of annual increase, proportion of males, proportion of foreign-born, proportion of foreign parentage, proportion of colored, proportion of illiterate, proportion of male wage-earners, proportion of ages under five years, ages 5 to 19, ages 20 to 64, ages 65 and over, ages unknown, mean annual maximum temperature, mean annual minimum temperature, and mean annual relative humidity. How far any or all of these factors affect human mortality is a question which can be determined only upon the basis of a thorough and critical analysis of all the available data bearing upon the subject.

The extremes in the variation of the elements of locality and population in the thirty-nine cities are as follows:—

RANGE OF ELEMENTS OF LOCALITY AND POPULATION.

Area	New Orleans, 125,600 acres	Allegheny, Pa., 4,639
Size	New York (Man. & Bronx), 2,050,600	Scranton, Pa., 102,026
Latitude	Minneapolis, 44.58° N.	New Orleans, 29.57° N.
Longitude	Boston, 71.4° W.	San Francisco, 121.24° W.
Elevation	Denver, 5,183 feet	New Orleans, 4.0 feet
Density	New York (Man. & Bronx), 50.9 persons per acre	New Orleans, 2.3 persons per acre
Annual Increase	Los Angeles, 10.3%	Cincinnati, 1.0%

Proportion of Males	St. Joseph, 55.0%	Washington, 47.4%
Proportion of Foreign-born	Fall River, 47.7%	Washington, 7.2%
Proportion of Foreign Parentage	Fall River, 86.1%	Washington, 20.9%
Proportion of Colored	Washington, 31.3%	Milwaukee, 0.3%
Proportion Illiterate	Fall River, 14.9%	Minneapolis, 1.8%
Proportion of Wage-earners	Pittsburg, 54.6%	St. Joseph, 12.3%
Ages, 0–5	Milwaukee, 12.3%	San Francisco, 7.6%
Ages, 5–9	Milwaukee, 32.6%	San Francisco, 23.4%
Ages, 20–64	San Francisco, 63.8%	Milwaukee, 51.6%
Ages, 64-	Syracuse, 4.5%	St. Joseph, 2.1%
Ages "Unknown"	Denver, 1.6%	Syracuse, 0.0%
Average Maximum Temperature	New Orleans, 76.1° F.	St. Paul, 53.0° F.
Average Minimum Temperature	New Orleans, 62.0° F.	St. Paul, 35.0° F.
Average Humidity	San Francisco, 79.9%	Denver, 48.7%
Average Death-rate per 1,000 (1900–04)	Pittsburg, 20.3	St. Joseph, 6.9

These extremes illustrate the serious difficulties of the problem and the practical certainty that conclusions which rest exclusively upon the general death-rate will be erroneous, particularly in the case of American cities. The conditions are such that even approximate truth is to be secured only by means of a critical analysis of the available data and a painstaking consideration of many facts and conditions which cannot be set forth in statistical tables.

There is a truly astonishing mass of material which has never been brought together in a convenient form, and which it is the proper function of the Federal Government to publish for general information and the advancement of the sciences of vital statistics and public health. There is an absence of uniformity in the age periods adopted, and also in the classification of the causes of death; but it would be possible under Government sanction to remedy many of the present shortcomings, if necessary, by an overhauling

of the original death certificates, which, of course in the large majority of instances, have been kept on file, and are available for that purpose. My own investigation is not sufficiently extensive in area to exhibit as clearly as would be desirable the intimate relation of mortality to any one or all of the twenty factors considered. The line had to be drawn somewhere, and by limiting the investigation to thirty-nine cities I had to exclude a large number of small cities, some of which have health records extending over long periods, and which, if included, would have thrown additional and valuable light upon the subject.*

In the present state of our vital statistics it is not possible to establish with more than approximate accuracy the probable relation of the various elements of locality and population to the general death-rate. The most important factor which enters into the problem is, without question, the age distribution of the population, which differs widely in different localities, and to a degree sufficient to lead to serious errors in a comparison of the general death-rate of certain communities with one another. As I have shown, the age constitution of the population of our large cities ranges, for illustration, from 32.6 per cent. of population at ages 5–19, in the case of Milwaukee, to 23.4 per cent. in the case of San Francisco. Since the specific death-rate at this period of life is only about 3.9 per 1,000, by the standard for the State of Massachusetts, it is readily apparent that

*I cannot at this time take up the subject of the probable defects and inaccuracies in the mortality returns of some of our cities, for which the published and official statements are without question understatements of the facts. There is a serious want of uniformity in the record of deaths; and certain cities even go so far as to exclude deaths from violence, suicide, and a number of other causes in the calculation of the local death-rate. Some cities exclude deaths of non-residents, which in certain cases form a very considerable item in the aggregate local mortality. Other cities merely report "officially" the local interments, and exclude the deaths of persons whose bodies were shipped for burial elsewhere. The matter is not only of local importance, but of national interest; and under the present organization and powers of the Census Office it would seem that an annual report on the mortality of the Registration Area of the United States should be made, with due regard to the elements of locality and population. The Federal Government alone has the power, the means, and the opportunity to deal with the subject in an adequate and satisfactory manner.

an excessive proportion of population at this age period must bring about a lowering of the general death-rate independent of local favorable or unfavorable health conditions; that is to say, a low general rate in the case of a city with a large proportion of population, ages 5–19, would probably be chiefly due to this fact, rather than to any particularly favorable health conditions of the locality.*

The specific death-rates at the four periods of life which I have considered in this investigation, by the standard for Massachusetts, are 52.6 per 1,000 at ages under 5, 3.9 at ages 5–19, 11.3 at ages 20–64, and 83.2 at ages 65 and over. If for the purpose of illustration we assume two localities, the one in which the population is distributed as follows: 6 per cent. at ages under 5, 34 per cent. at ages 5–19, 57 per cent. at ages 20–64, and 3 per cent. at ages 65 and over; and another locality in which the population is distributed as follows: 6 per cent. at ages under 5, 28 per cent. at ages 5–19, 57 per cent. at ages 20–64, and 9 per cent. at ages 65 and over; and, if upon the basis of this age distribution we apply the identical specific death-rates previously stated, we shall have in the case of the first-named city a general death-rate of 13.42 per 1,000 against 18.18 per 1,000 in the other, although in each case the specific mortality

* A striking illustration of the fallacy of such a comparison, upon the basis of the general death-rate, is the following for the cities of Fall River and San Francisco. The general death-rate of the former, by the census of 1900, was 22.4 per 1,000 against 20.5 for the latter, but, as a matter of fact, the specific death-rates were higher for San Francisco at all age periods except ages under five.

COMPARATIVE MORTALITY OF FALL RIVER AND SAN FRANCISCO, CENSUS OF 1900.

	General Death-rate.	Specific Death-rate per 1,000 at each Age.						
		Under 5.	5–14.	15–24.	25–34.	35–44.	45–64.	65 and over.
Fall River . .	22.4	98.3	3.5	4.9	8.4	9.9	26.3	94.4
San Francisco	20.5	45.7	4.6	7.9	12.0	16.9	34.2	100.0
Deaths in Fall River to every 100 in San Francisco. .	109	215	76	62	70	59	77	94

at each period of life is exactly the same. While I cannot very well at this time go further into the subject, I lay particular stress upon the seriously disturbing factor of the age distribution of the population and the necessity of taking this element into account in any comparison which may be made of the health conditions of one city with another and which can safely and finally be determined only upon the basis of specific death-rates for different periods of life, and not upon the general death-rate for the population as a whole.

As I have more than once pointed out, the present investigation is too limited in the number of cities considered to warrant final conclusions upon the actual effect of various local conditions and elements of population upon the general death-rate, but the various tables which follow afford a large amount of material for useful investigations, which, of course, can easily be extended by adding thereto the corresponding data for American cities with populations of less than 100,000. However, in a very general way, and rather as an introduction to the method which should be followed than as a final expression of opinion on possible laws of human mortality, I add to the preceding observations summary statements and observations, which on the whole will be found to correspond to generally accepted theories of vital statistics.

For the purpose of presenting in the form of a convenient summary some of the more general results of this investigation, I have in each of the twenty subdivisions of the elements of locality and population made a grouping of the cities into two divisions, representing respectively the two extremes of the group as a whole. While the division in some cases may appear arbitrary, it was difficult to adopt a more scientific grouping on account of the relatively small number of communities included in the investigation. In some cases also I did not succeed in obtaining all of the data of mortality or elements of locality and population, so that in

a few of the summary tables not all of the thirty-nine cities are included. The general death-rate is always for the five years 1900–04, and for the Southern cities only the white population has been considered, in order to eliminate errors resulting from the much higher general mortality of the negro population. The summary tables give the total populations and deaths for the five-year period and the corresponding death-rates are calculated from the facts given. Any other arrangement can be made without difficulty from the forty-four final tables.

The mere size of cities or aggregate population has, without question, a very definite relation to the general death-rate. In the following summary table each division is according to population above and below 300,000. The general death-rate of the first group was 17.8, and of the second group 15.7 per 1,000.

RELATION OF AGGREGATE POPULATION TO THE GENERAL DEATH-RATE, 1900–04.

Population.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000
300,000 and over . .	12	50,456,934	897,633	17.8
Under 300,000	27	22,113,787	346,379	15.7

The relation of the general death-rate to density of population is a well-established fact of vital statistics, and is referred to by nearly every writer upon the subject. In the case of American cities, however, exceptional care is necessary in order to avoid erroneous conclusions on account of the fact that in a number of cases the actual area of the city within the limits of incorporation does not correspond even approximately to the area of actual settlement. This, for illustration, is true of the cities of Greater New York and New Orleans, both of which have large areas which are practically as yet outside of actual settlement or are used for park purposes. To establish the fact of the relation of den-

sity to population with scientific accuracy, it would be necessary to adopt a smaller unit of area, such as wards or sanitary districts.*

In the following table I have adopted a broad division of thirteen cities with a density of fifteen or more persons to the acre, and of twenty-two cities with a density of less than fifteen persons per acre. Greater New York is not included in this table. The general death-rate for the group with the highest density was 18.3 per 1,000 against 15.5 for the group of cities with the lowest degree of density. The table, therefore, confirms the well-established doctrine that the general death-rate, other things equal, increases in proportion to increasing density of population.

RELATION OF DENSITY OF POPULATION TO THE GENERAL DEATH-RATE, 1900–04.

Density per Acre.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
15 persons and over .	16	41,858,895	767,187	18.3
Less than 15 persons .	23	30,711,826	476,825	15.5

The relation of geographical position to the general death-rate is a matter of very considerable importance. Unfortunately, for the present purpose the number of cities considered is not sufficiently large to warrant final conclusions with a more minute regard to difference, in location or even upon the broad division of cities North and South. To present this matter with scientific accuracy in a country of so vast an extent as the United States, it would be better to consider the two elements of latitude and longitude in conjunction with each other. As previously pointed out, the small number of cities considered in this investigation precludes such a division at the present time. I have di-

* An admirable attempt in this direction is the report of Dr. John S. Billings on the vital statistics of New York, Brooklyn, Boston, Philadelphia, District of Columbia, and Baltimore for the period 1885–90, in connection with the Eleventh Census.

vided the cities into two groups, respectively, north and south of the fortieth parallel, and it is shown in the table below that in the first group the general death-rate was 16.9 per 1,000 against 17.6 in the last. If a more minute division had been adopted, the differences in the general death-rate of Northern and Southern cities would have been brought out more clearly. Of course, for a more elaborate analysis the facts are made available by the tables for individual cities.

RELATION OF LATITUDE TO THE GENERAL DEATH-RATE, 1900–04.

Latitude (North).	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
Above 40 degrees . .	24	49,464,356	836,823	16.9
Below 40 degrees . . .	15	23,106,365	407,189	17.6

Considering the probable relation of geographical position according to longitude, it must not be overlooked that, speaking generally, as we proceed westward we are met by an increasing altitude, which, as will presently be shown, has a very considerable effect upon the general death-rate. In the table which follows I have divided the cities into two groups as they are located respectively east or west of the 80th meridian. The general death-rate in the group of seventeen Eastern cities was 18.5 per 1,000 against 15.5 for the group of twenty-two Western cities. A more elaborate

RELATION OF LONGITUDE TO THE GENERAL DEATH-RATE, 1900–04.

Longitude. (W of Greenwich.)	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
East of 80 degrees . .	17	39,557,551	730,954	18.5
West of 80 degrees . .	22	33,013,170	513,058	15.5

analysis of the facts, according to local physiographic features and conditions, such as, for illustration, location along the Great Lakes or in the Valley of the Mississippi

River, would have brought out various striking features, for which, of course, the data are made available through the tables in detail for the thirty-nine individual cities.

As previously pointed out, it is a well-established fact that, other things equal, the general death-rate decreases with increasing altitude except at extreme elevations. In the summary table exhibiting the general relation of altitude to the general death-rate I have drawn the line of division at 500 feet, and it is shown in the table which follows that the general death-rate of cities above the altitude of 500 feet was 14.4 per 1,000 against 18.7 for cities below an elevation of 500 feet above sea-level.

RELATION OF ALTITUDE TO THE GENERAL DEATH-RATE, 1900–04.

Altitude.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
Above 500 feet . . .	18	27,015,974	390,214	14.4
Below 500 feet	21	45,554,747	853,798	18.7

One of the most disturbing factors affecting the elements of population is the rate of annual increase,* which varies from almost a stationary population, in the case of Cincinnati, to as much as 10.3 per cent. in the case of the city of Los Angeles. It is reasonable to suppose that in cities with a rapidly increasing population, particularly where the increase is the result of immigration consisting principally of males, ages 15–45, the general death-rate would be low, independent of local favorable or unfavorable health conditions. In the table which follows I have arranged the cities according to the rate of annual increase in population, but the division is a very arbitrary one and a more complete analysis would be necessary for a final expression of opinion upon this point. The first group represents cities with an average annual rate of increase of more than 5 per cent., and for this group the general death-rate was

* The rate of increase is, according to the census of 1900, for the period 1890–1900.

14.0 per 1,000: the second group represents cities with an annual increase in population of less than 5 per cent., and for this group the general death-rate was 17.8 per 1,000.

RELATION OF ANNUAL INCREASE IN POPULATION TO THE GENERAL DEATH-RATE, 1900-04.

Annual Increase in Population.	Number of Cities.	Total Population, 1900-04.	Total Mortality, 1900-04.	General Death-rate per 1,000.
5 per cent., and over .	5	12,099,411	169,424	14.0
Under 5 per cent. . .	34	60,471,310	1,074,588	17.8

It is a well-established fact that, speaking generally, the mortality of males is higher than the corresponding mortality of females, but the difference in the mortality is, as a rule, obscured in the general death-rate on account of a more favorable age distribution of males resulting from immigration.* It is due to this fact that cities with a proportionately large number of males have, as a rule, a lower general death-rate than where the opposite condition exists, and this is brought out in the next table. Cities with a proportion of males of 50 per cent. and over show a general death-rate of 15.4 per 1,000, while those with a proportion of males of less than 50 per cent. show a general death-rate of 18.1 per 1,000. This condition, however, as I have pointed out, is not the result of sex distribution, but, in all probability, is due to the more favorable age distribution of males in certain cities in which the proportion of men is excessive.

The mortality of the foreign-born in the United States is unquestionably much higher than the corresponding mortality of the natives when the analysis is extended to

*Comparative Mortality of Males and Females (Registration Record), United States Census of 1900 (Rates per 1,000 of Population at each Age).

	All Ages.	Under 5.	5-14.	15-24.	25-34.	35-44.	45-64.	65 and over.
Males	19.0	56.7	4.4	6.7	9.5	12.4	24.1	91.1
Females . . .	16.6	47.5	4.2	6.1	8.5	10.5	20.1	82.6

RELATION OF **PROPORTION OF MALE POPULATION** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Males.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
50 per cent. and over	15	25,054,048	385,624	15.4
Under 50 per cent. . .	24	47,516,673	858,388	18.1

different periods of life. In the summary table which follows the cities have been arranged according to the proportion of foreign-born, the first group having 30 per cent. or more of the foreign-born element and a general death-rate of 17.3 per 1,000, while the second group has less than 30 per cent. of foreign-born and a general death-rate of 17.0 per 1,000. It is necessary for me to add, however, that the term "foreign-born" is seriously misleading if the various nationalities are considered in the aggregate, for there are very wide differences in the mortality and disease liability of the different nationalities which have come to this country. Here, again, the age factor plays an important part, and representing, as the foreign-born do, chiefly male adults, ages 20–60, the factor of nationality is not so clearly exhibited in the general death-rate as would be the case if specific death-rates were calculated according to well-defined periods of life.†

RELATION OF **PROPORTION OF FOREIGN-BORN** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Foreign-born.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
30 per cent. and over	13	39,993,902	691,789	17.3
Under 30 per cent. . .	26	32,576,819	552,223	17.0

† COMPARATIVE MORTALITY OF THE NATIVE AND FOREIGN BORN, REGISTRATION RECORD, CENSUS OF 1900 (RATES PER 1,000 POPULATION AT EACH AGE).

	AGES.				
	15–24.	25–34.	35–44.	45–64.	65 and over.
Native-born whites	6.0	8.8	10.7	18.4	82.7
Foreign-born	5.6	8.2	11.6	25.8	90.3
Of foreign parentage . . .	6.1	10.4	12.6	18.8	87.6

Foreign parentage is another disturbing element in American vital statistics, and the conditions differ widely in various cities. In some cities the proportion of persons of foreign parentage—as, for illustration, in the case of Fall River, Mass.—is as high as 86 per cent. and as low as 20.9 per cent. in the case of Washington, D.C. There is another element which enters into the problem of foreign parentage in its relation to the general death-rate, and that is the higher fecundity of most of the foreign nativities as contrasted with the native element, and for this and other reasons the results of a general analysis are not conclusive.* The division in the following table is made between cities having 60 per cent. or more of the population of foreign parentage, of which the death-rate was 16.2 per 1,000, and cities having less than 60 per cent. of their population of foreign parentage, of which the death rate was 18.1.

RELATION OF **PROPORTION OF FOREIGN PARENTAGE** TO THE GENERAL DEATH-RATE, 1900-04.

Proportion of Foreign Parentage.	Number of Cities.	Total Population, 1900-04.	Total Mortality, 1900-04.	General Death-rate per 1,000.
60 per cent. and over .	22	36,960,643	600,010	16.2
Under 60 per cent. . .	17	35,610,078	644,002	18.1

Next to age there is probably no factor which so profoundly modifies the death-rate as race. As has been shown in the consolidated tables, the white death-rate of Southern cities for 1904 was 17.4 per 1,000 against a rate of 28.1 for

* COMPARATIVE MORTALITY BY BIRTHPLACE OF MOTHERS, REGISTRATION RECORD, U.S. CENSUS OF 1900 (RATES PER 1,000 POPULATION AT EACH AGE).

	AGES.				
BIRTHPLACES OF MOTHERS.	15-24.	25-34.	35-44.	45-64	65 and over.
United States	5.0	6.4	7.5	14.6	65.9
Ireland	7.5	12.2	15.0	30.6	96.9
Germany	4.8	7.4	9.6	20.3	81.8
England and Wales	4.6	6.6	8.8	18.3	81.1
Scandinavia	5.7	7.4	9.0	16.9	67.3

the colored element of the same cities. In other words, the general death-rate of the colored population at the present time is 61.5 per cent. in excess of the general death-rate of the white population of Southern cities. The effect of a large colored element is not clearly brought out in a general analysis of the facts regarding large American cities, due chiefly to the uneven distribution of this element, which is chiefly concentrated in the South. There can be no question, however,—and the view is sustained by the tables for individual cities,—that a large proportion of negroes is usually found to coincide with a higher death-rate. In the summary table I have found it necessary to adopt a rather arbitrary division, due to the facts previously stated; and the results are, therefore, inconclusive. The group of cities with a proportion of colored population of 5 per cent. and over shows a general death-rate of 17.3 per 1,000 against 17.1 for cities with a colored population of less than 5 per cent. If the line of division had been drawn at cities having 25 per cent. of colored population and over, of which in this inquiry, however, there are only three, the rate would have been 21.3 per 1,000.*

RELATION OF **PROPORTION OF COLORED POPULATION** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Colored Population.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
5 per cent. and over .	12	15,109,864	261,140	17.3
Under 5 per cent. . .	27	57,460,857	982,872	17.1

*Comparative Mortality of the White and Colored Male Populations Registration Record, U.S. Census of 1900 (Rates per 1,000 Population at each Age).

	Ages.						
	Under 5.	5–14.	15–24.	25–34.	35–44.	45–64.	65 and over.
White males	54.2	4.2	6.2	9.0	12.0	23.5	90.4
Colored males	127.2	9.2	17.2	18.2	21.5	38.6	119.8
Deaths among colored males to every 100 among white males .	235	219	277	202	179	164	133

The relation of illiteracy to the general death-rate has not, as far as I am aware, been a subject of previous investigation. It is shown by the table which follows that cities with a proportion of illiteracy of 5 per cent. and more had a general death-rate of 19.5 per 1,000, while cities with a proportion of illiterates of less than 5 per cent. show a general death-rate of only 16.2 per 1,000.

RELATION OF **PROPORTION OF ILLITERATE POPULATION** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Illiterates.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
5 per cent. and over .	10	21,080,224	411,124	19.5
Under 5 per cent. . .	29	51,490,497	832,888	16.2

The relation of occupation to health and mortality has been a subject of careful inquiry for many years, and this has been particularly the case in England, where the effect of manufactures upon the health and physique of the people employed in mechanical industries has received the attention of distinguished physicians and experts in statistics.* The general effect of manufacturing industries upon the general death-rate, however, is obscured by other factors, chiefly the peculiar age distribution of cities containing a large proportion of wage-earners employed in manufacturing establishments, so that a general inquiry into the subject fails to produce conclusive proof.† In the summary table showing the relation of the proportion of male wage-earners to the general death-rate, the rate for cities containing 30 per cent. or more of male wage-earners in proportion to the total male population, ages 15 and over, was 17.0 per 1,000 against 17.5 for cities with a proportion

* See in particular the annual reports of the Medical Officers of Health of Sheffield and Blackburn, England.

† I have discussed this subject at length in an address on "The Physical and Medical Aspects of Labor and Industry" before the Tenth Annual Meeting of the American Academy of Political and Social Science, Philadelphia, 1906.

of wage-earners below 30 per cent. In other words, the analysis is not sufficient to clearly establish the recognized injurious effects of indoor occupations generally or of employment in factories particularly, upon the general death-rate. To establish the true effect of manufacturing industries upon the health of the population, it is necessary to subject the data to a critical analysis and to consider individual industries with special reference to local conditions. There is probably no more important subject confronting health officers and others interested in the health and welfare of the wage-earning element of the population to-day than the unquestionably injurious effects resulting from long-continued employment in recognized ill-health-producing industries and hazardous employments. However, to avoid an erroneous interpretation of the summary table, I may add that, if the grouping had been limited to four cities which have a proportion of male wage-earners of 50 per cent. or more, the general death-rate would have been 19.4 per 1,000 against 17.4 for a group of six cities having a proportion of male wage-earners of less than 20 per cent.

RELATION OF PROPORTION OF MALE WAGE-EARNERS TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Male Wage-earners.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
30 per cent. and over .	24	52,809,053	899,145	17.0
Under 30 per cent. . .	15	19,761,668	344,867	17.5

As I have previously pointed out, the age distribution of the population is probably the most important factor affecting the general death-rate. In any comparison of one city with another in order to determine the local health conditions upon the basis of the general death-rate, it is necessary to ascertain first whether the age distribution of the population is at least approximately the same. In American cities the differences are very great, as illustrated in the extremes of Milwaukee and San Francisco, there being

in the former city 12.3 per cent. of the population at ages under 5 against 7.6 in the latter. Again, at ages 65 and over, the proportion of population is 4.5 per cent. for Syracuse, and only 2.1 per cent. for St. Joseph, Mo. These extremes illustrate the possibility of serious error in the use of the general death-rate, and emphasize the need of specific death-rates calculated for well-defined periods of life. In the summary table which follows I have divided the cities into two groups, having respectively a proportion of population at ages under five of 11 per cent. and over and of less than 11 per cent. The general death-rate in the first group was 17.3 per 1,000 against 16.9 in the second. Partly as the result of a diminishing birth-rate, but chiefly on account of the decreasing mortality of infants, a large proportion of children in the population of a city has not to-day the determining effect upon the general death-rate which it had in the past. The comparison, however, sustains the well-established principle that cities with a large proportion of children under 5 years will, other things equal, have a general death-rate above the average chiefly because of this fact, and not necessarily because of local unfavorable health conditions.

RELATION OF PROPORTION OF POPULATION OF AGES UNDER 5 YEARS TO THE GENERAL DEATH-RATE, 1900-04.

Proportion of Ages under 5.	Number of Cities.	Total Population, 1900-04.	Total Mortality, 1900-04.	General Death-rate per 1,000.
11 per cent. and over .	12	37,638,968	652,764	17.3
Under 11 per cent. . .	27	34,931,753	591,248	16.9

The next period of life—ages 5-19—has a very material effect upon the general death-rate, the more so in the case of American cities where the extremes are considerable, as, for illustration, in Milwaukee and San Francisco, being 32.6 per cent. in the former city against 23.4 per cent. in the latter. In the summary table I have made the division at cities having 29 per cent. or more of the population at

ages 5–19 and those with less than 29 per cent. The general death-rate in the first group was 15.4 per 1,000 against 18.3 in the second.

RELATION OF **PROPORTION OF POPULATION OF AGES 5–19** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Ages, 5–19.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
29 per cent. and over .	15	28,064,321	431,004	15.4
Under 29 per cent. . .	24	44,506,400	813,008	18.3

While a large proportion of population at ages 5–19 is practically certain, other things equal, to reduce the general death-rate, a large proportion of the population of ages 20–64 is practically certain to increase the rate above the average. This is brought out by the next summary table, in which I have drawn the division at cities having 58 per cent. and over of the population at ages 20–64, inclusive, and cities having less than 58 per cent. of the population at this period of life. In the first group the general death-rate was 18.0 per 1,000 against 16.4 in the second.

RELATION OF **PROPORTION OF POPULATION OF AGES 20–64** TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Ages, 20–64.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
58 per cent. and over .	19	33,221,015	599,577	18.0
Under 58 per cent. . .	20	39,349,706	644,435	16.4

On account of the high death-rate in old age, which by the standard for Massachusetts is 83.2 per 1,000 for ages 65 and over,* an excessive proportion of old persons is practically certain, other things equal, to materially increase the general death-rate. This is best illustrated in the case of cities which have almshouses or soldiers' homes. In the summary table which follows I have divided the cities into two groups, having respectively 3.5 per cent. of the population of ages

* For the registration area of the United States the rate for 1900 was 86.6.

65 and over and cities having less than 3.5 per cent. While numerically the proportion of population is small, the actual number of deaths occurring at this period of life is very considerable, and materially disturbs the general death-rate where the proportion of old persons is very large. The general death-rate in the first group of cities with a high proportion of persons of advanced years was 18.0 per 1,000 against 16.7 in the second.

RELATION OF PROPORTION OF POPULATION OF AGES 65 AND OVER TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Ages, 65 and over.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
3.5 per cent. and over	15	23,370,299	421,373	18.0
Under 3.5 per cent. . .	24	49,200,422	822,639	16.7

I add a table of the cities arranged according to the proportion of persons whose ages were unknown. In the group of cities having less than 0.5 per cent. of population of ages which were not returned by the census, the general death-rate was 17.4 against 17.1 per 1,000 for cities having less than 0.5 per cent. of population of unknown ages.

RELATION OF PROPORTION OF POPULATION OF AGES UNKNOWN TO THE GENERAL DEATH-RATE, 1900–04.

Proportion of Ages Unknown.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
0.5 per cent. and over .	8	11,630,550	201,969	17.4
Under 0.5 per cent. . .	31	60,940,171	1,042,043	17.1

The relation of climate to health is a most important branch of medicine and vital statistics. It is not possible for me at this time to discuss details, partly because of the limitations of time and space and partly because the number of cities considered in this investigation is not sufficiently large to warrant final conclusions. There is probably no more profitable line of inquiry to be followed by students interested in the subject than the true relation of departures

from normal weather conditions to local health and mortality. The process of inquiry, however, is a very laborious one, since crude averages serve only a very limited and very often no practical purpose. To properly determine the relation of climate to mortality, it is necessary to consider the daily fluctuations in temperature, rain-fall, humidity, direction of winds, etc. Few Boards of Health return the mortality of a given locality by days, and the weekly returns are often not sufficient for the purpose of accurately determining the effect of local weather conditions upon local health and mortality.* In the three summary tables which follow I have limited myself, for the purpose of illustration, to the mean maximum annual temperature, the mean minimum annual temperature, and the mean per cent. of relative humidity. I have not been able to secure the necessary data for certain cities, and the comparison is therefore limited to only twenty-seven localities. In the summary table which follows the groups are divided into cities with a mean maximum temperature of 60 degrees and over and cities with a temperature below 60 degrees. In the former group, the general rate was 18.6 per 1,000 against 14.6 in the latter.

RELATION OF MEAN MAXIMUM TEMPERATURE TO THE GENERAL DEATH-RATE, 1900–04.

Temperature.	Number of Cities.	Total Population, 1900–04.	Total Mortality, 1900–04.	General Death-rate per 1,000.
60 degrees and over .	16	35,330,873	656,899	18.6
Under 60 degrees . .	11	23,249,691	338,743	14.6

The summary table showing the relation of mean minimum temperature to the general death-rate has been divided into eleven cities with a mean minimum temperature of 45 degrees and over and sixteen cities with a mean temperature of less than 45 degrees. In the former the general death-rate was 18.9 per 1,000 against 14.9 in the latter.

* As, for illustration, in the study of the mortality from suicide and sunstroke or the relation of weather to conduct and health.

RELATION OF MEAN MINIMUM TEMPERATURE TO THE GENERAL DEATH-RATE, 1900-04.

Temperature.	Number of Cities.	Total Population, 1900-04.	Total Mortality, 1900-04.	General Death-rate per 1,000.
45 degrees and over .	11	30,683,839	579,512	18.9
Under 45 degrees . .	16	27,896,725	416,130	14.9

The summary table showing the mean relative humidity in its relation to the general death-rate has been divided into two groups of cities having respectively a mean relative humidity of 70 per cent. and over and of less than 70 per cent. In the former group the general death-rate was 17.1 per 1,000 against 18.2 in the latter.* For a proper determination of the true effect of relative humidity to mortality it would be necessary to have a larger number of cities, and to eliminate the disturbing factor of increasing altitude. It is also advisable to take into consideration the dew point, which by some writers is held to be one of the most determining climatological factors in its effect upon the general death-rate.

RELATION OF MEAN RELATIVE HUMIDITY TO THE GENERAL DEATH-RATE, 1900-04.

Humidity.	Number of Cities.	Total Population, 1900-04.	Total Mortality, 1900-04.	General Death-rate per 1,000.
70 per cent. and over .	19	47,648,260	814,127	17.1
Under 70 per cent. . .	7	9,875,244	179,601	18.2

Summarizing these observations for the twenty elements of locality and population, it is brought out that there are certain striking differences in the general death-rate which apparently have no relation to local health conditions, such as water supplies, sewerage, sanitary administration, etc., but that they are rather the result of differences in the ele-

*If the comparison had been limited to two cities with a humidity above 76 per cent. and the comparison had been made with another group of cities having from 50 to 70 per cent. of humidity, the respective death-rates would have been 20 per 1,000 in the first group against 17 per 1,000 in the second.

ments of locality and population and not necessarily connected with local conditions determining normal health and long life. The summary tables illustrate the imperative necessity of extreme caution in the use of the general death-rate, and the limitation, as a rule, of the rate to local purposes to illustrate and determine the upward or downward direction of the death-rate of any given locality. In this, as in other problems of life the best results will follow from a careful study of local conditions, and, generally speaking, a disregard of conditions as they prevail in other communities with which any given locality may not be comparable or may differ in respect to elements over which the population may have no control. In other words, the value of the general death-rate is *specifically local*, and for this object it is shown, in the large majority of the cities reported upon in detail, to be of specific and determining value. What the people of any given city are chiefly interested in is to know whether the local death-rate is increasing or decreasing as compared with the returns for previous years or the past decade or generation, and they are only incidentally interested in conditions as they prevail elsewhere, and which for all practical purposes may afford no useful means of comparison.

The forty-four tables which follow will afford a convenient summary of the general facts of the elements of population and locality, and the general death-rate of the thirty-nine principal cities of the United States. The population for intercensal years has been estimated by the geometrical method, but in some cases it may be advisable to use the arithmetical method for the years subsequent to 1900. The tables, as far as I know, have never heretofore been published, and it is hoped that they may prove useful to those interested in the development of the sciences of vital statistics and public health.

NEW YORK CITY (MANHATTAN AND BRONX BOROUGHS).

Latitude, 40° 45′; longitude, 74° 0′. Elevation, 52 feet.

		Per Cent.
Land area, in acres	40,320	...
Population in 1900	2,050,600	...
Density per acre	50.9	...
Rate of annual increase of population	...	3.4
Proportion of males in total population	...	49.7
" foreign-born	...	41.5
" foreign parentage	...	39.0
" colored	...	2.1
" illiterate	...	8.3
" male wage-earners (15-over)	...	32.9
" ages under 5	...	11.5
" ages 5–19	...	27.3
" 20–64	...	58.5
" ages 65-over	...	2.5
" ages unknown	...	0.2
Mean maximum temperature	60°	...
" minimum temperature	45°	...
" relative humidity	...	73.2
Average death-rate, 1900–04	20.1	

MORTALITY OF NEW YORK CITY (MANHATTAN, BRONX), 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	965,849	26,976	27.9
1872	989,995	32,647	33.0
1873	1,014,744	29,084	28.9
1874	1,040,110	28,727	27.6
1875	1,066,113	30,709	28.8
1876	1,092,763	29,152	26.7
1877	1,120,079	26,203	23.4
1878	1,148,082	27,008	23.5
1879	1,176,782	28,342	24.1
1880	1,206,299	31,937	26.5
1881	1,234,166	38,624	31.3
1882	1,262,669	37,924	30.0
1883	1,291,838	34,011	26.3
1884	1,321,682	35,034	26.5
1885	1,352,211	35,682	26.4
1886	1,383,446	37,351	27.0
1887	1,415,408	38,933	27.5
1888	1,448,106	40,175	27.7
1889	1,481,561	39,679	26.8
1890	1,515,301	40,103	26.5
1891	1,575,722	43,659	27.7
1892	1,622,679	44,329	27.3
1893	1,671,035	44,486	26.6
1894	1,720,832	41,175	23.9
1895	1,772,113	43,420	24.5
1896	1,824,922	41,622	22.8
1897	1,879,305	38,877	20.7
1898	1,935,308	40,438	20.8
1899	1,992,980	39,911	20.0
1900	2,050,600	43,226	21.1
1901	2,111,708	43,304	20.5
1902	2,174,637	41,704	19.2
1903	2,239,441	41,547	18.6
1904	2,306,624	48,743	21.1

CHICAGO, ILL.

Latitude, 41° 50′; longitude, 87° 37′. Elevation, 590 feet.

		Per Cent.
Land area, in acres	114,932	...
Population in 1900	1,698,575	...
Density per acre	14.8	...
Rate of annual increase of population	...	5.4
Proportion of males in total population	...	50.8
" foreign-born	...	34.6
" foreign parentage	...	77.4
" colored	...	1.9
" illiterate	...	3.9
" male wage-earners (15–over)	...	35.6
" ages under 5	...	11.2
" ages 5–19	...	29.1
" ages 20–64	...	56.9
" ages 65–over	...	2.5
" ages unknown	...	0.3
Mean maximum temperature	56°	...
" minimum temperature	42°	...
" relative humidity	...	74.8
Average death-rate, 1900–04	14.1	...

MORTALITY OF CHICAGO, ILL., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	314,957	6,976	22.1
1872	331,791	10,156	30.6
1873	349,525	9,557	27.3
1874	368,207	8,075	17.9
1875	387,888	7,899	20.4
1876	408,621	8,573	21.0
1877	430,462	8,026	18.6
1878	453,470	7,422	16.4
1879	477,708	8,614	18.0
1880	503,185	10,462	20.8
1881	544,119	13,874	25.5
1882	588,383	13,234	22.5
1883	636,247	11,555	18.2
1884	688,006	12,471	18.1
1885	743,975	12,474	16.7
1886	804,497	13,699	17.0
1887	869,943	15,409	17.7
1888	940,713	15,772	16.8
1889	1,017,240	16,946	16.7
1890	1,099,850	21,869	19.9
1891	1,148,683	27,754	24.2
1892	1,199,681	26,219	21.9
1893	1,252,945	27,083	21.6
1894	1,308,571	23,892	18.3
1895	1,366,671	24,219	17.7
1896	1,427,350	23,257	16.3
1897	1,490,724	21,809	14.6
1898	1,556,908	22,793	14.6
1899	1,626,037	25,503	15.7
1900	1,698,575	24,941	14.7
1901	1,773,991	24,406	13.8
1902	1,852,756	26,455	14.3
1903	1,935,018	28,914	14.9
1904	2,020,932	26,311	13.0

PHILADELPHIA, PA.

Latitude, 39° 57′; longitude, 75° 10′. Elevation, 44 feet.

		Per Cent.
Land area, in acres	81,833	...
Population in 1900	1,293,697	...
Density per acre	15.8	...
Rate of annual increase of population	...	2.4
Proportion of males in total population	...	49.0
" foreign-born	...	22.8
" foreign parentage	...	54.9
" colored	...	4.9
" illiterate	...	4.4
" male wage-earners (15–over)	...	38.4
" ages under 5	...	10.1
" ages 5–19	...	26.7
" ages 20–64	...	59.0
" ages 65–over	...	3.9
" ages unknown	...	0.3
Mean maximum temperature	62°	...
" minimum	46°	...
" relative humidity	...	70.3
Average death-rate 1900–04	18.5	...

MORTALITY OF PHILADELPHIA, PA., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	689,592	16,118	23.4
1872	705,522	19,710	27.9
1873	721,820	15,835	21.9
1874	738,494	15,424	20.9
1875	755,553	18,084	23.9
1876	773,006	19,116	24.7
1877	790 867	16,004	20.2
1878	809,131	15,945	19.7
1879	827,822	15,663	18.9
1880	847,170	17,942	21.2
1881	865,309	19,761	22.8
1882	883,827	20,293	23.0
1883	902,741	20,338	22.5
1884	922,060	20,321	22.0
1885	941,792	21,694	23.0
1886	961,946	20,348	21.2
1887	982,532	22,195	22.6
1888	1,003,558	20 851	20.8
1889	1,025,034	21,038	20.5
1890	1,046,964	22,275	21.3
1891	1,069,313	24,003	22.4
1892	1,092,140	25,032	22.9
1893	1,115,457	24,442	21.9
1894	1,139,275	23,499	20.6
1895	1,163,593	24,635	21.2
1896	1,188,432	24,757	20.8
1897	1,213,803	23,552	19.4
1898	1,239,715	24,612	19.9
1899	1,266,188	24,534	19.4
1900	1,293,697	24,461	18.9
1901	1,321,317	24,659	18.7
1902	1,349,527	24,396	18.1
1903	1,378,339	25,540	18.5
1904	1,407,766	25,971	18.4

NEW YORK CITY (BROOKLYN BOROUGH).

Latitude, 40° 45′; longitude, 70° 0′. Elevation, 52 feet.

		Per Cent.
Land area, in acres	49,280	...
Population in 1900	1,166,582	...
Density per acre	23.7	...
Rate of annual increase of population	...	4.5
Proportion of males in total population	...	49.2
" foreign-born	...	30.5
" foreign parentage	...	41.4
" colored	...	1.7
" illiterate	...	4.6
" male wage-earners (15–over)	...	19.9
" ages under 5	...	11.6
" ages 5–19	...	28.5
" ages 20–64	...	56.6
" ages 65–over	...	3.3
" ages unknown	...	0.0
Mean maximum temperature, " minimum temperature, " relative humidity	See New York City (Manhattan and Bronx)	
Average death-rate 1900–04	18.5	...

MORTALITY OF BROOKLYN (NEW YORK). 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	412,042	10,259	24.9
1872	428,627	12,684	29.6
1873	445,879	10,968	24.6
1874	463,826	11,011	23.7
1875	482,493	12,470	25.8
1876	498,246	12,334	24.8
1877	514,514	11,362	22.1
1878	531,313	11,075	20.8
1879	548,660	11,569	21.1
1880	566,663	13,222	23.3
1881	587,063	14,533	24.8
1882	608,197	15,014	24.7
1882	630,092	13,758	21.8
1884	652,775	14,116	21.6
1885	676,275	15,369	22.7
1886	700,621	15,644	22.3
1887	725 843	17,078	23.5
1888	751,973	18,061	24.0
1889	779,044	18,480	23.7
1890	806,343	19,827	24.6
1891	836,661	21,349	25.5
1892	868,119	20,807	24.0
1893	900,760	21,017	23.3
1894	934,629	21,183	22.7
1895	969,771	22,568	23.3
1896	1,006,233	22,501	22.4
1897	1,044,064	20,593	19.7
1898	1,083,317	21,989	20.3
1899	1,124,043	21,649	19.3
1900	1,166,582	23,507	20.2
1901	1,210,468	23,271	19.2
1902	1,256,005	22,344	17.8
1903	1,303,255	22,192	17.0
1904	1,352,779	24,831	18.4

ST. LOUIS, MO.

Latitude, 38° 38′; longitude, 90° 12′. Elevation, 455 feet.

		Per Cent.
Land area, in acres	39,277	...
Population in 1900	575,238	...
Density per acre	14.6	...
Rate of annual increase of population	...	2.7
Proportion of males in total population	...	50.1
" foreign-born	...	19.4
" foreign parentage	...	61.0
" colored	...	6.2
" illiterate	...	4.4
" male wage-earners (15-over)	...	31.9
" ages under 5	...	9.9
" ages 5–19	...	29.1
" ages 20–64	...	57.2
" ages 65-over	...	3.3
" ages unknown	...	0.5
Mean maximum temperature	65°	...
" minimum temperature	48°	...
" relative humidity	...	69.5
Average death-rate 1900–04	17.7	...

MORTALITY OF ST. LOUIS, MO., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	314,625	5,265	16.7
1872	318,431	8,047	25.3
1873	322,284	8,551	26.5
1874	326,184	6,506	19.9
1875	330,131	7,532	22.8
1876	334,126	6,019	18.0
1877	338,169	5,660	16.7
1878	342,261	6,002	17.5
1879	346,402	6,167	17.8
1880	350,518	6,636	18.9
1881	359,631	8,410	23.4
1882	368,981	7,845	21.3
1883	378,575	8,177	21.6
1884	388,418	7,887	20.3
1885	398,517	7,490	18.8
1886	408,878	8,268	20.2
1887	419,509	9,155	21.8
1888	429,390	9 015	21.0
1889	440,554	8,004	18.2
1890	451,770	8,409	18.6
1891	462,816	9,530	20.6
1892	474,132	10,225	21.6
1893	485,725	10,303	21.2
1894	497,601	8,710	17.5
1895	509,747	9,425	18.5
1896	522,209	9,897	19.0
1897	534 977	9,554	17.9
1898	548,057	8,908	16.3
1899	561,456	10,023	17.9
1900	575,238	9,847	17.1
1901	589,302	10,601	18.8
1902	603,710	10,353	18.3
1903	618,470	11,145	18.0
1904	633,591	11,506	17.6

BOSTON, MASS.

Latitude, 42° 22′; longitude, 71° 4′. Elevation, 12 feet.

		Per Cent.
Land area, in acres	27,532	...
Population in 1900	560,892	...
Density per acre	20.4	...
Rate of annual increase of population		2.5
Proportion of males in total population	...	49.0
" foreign-born	...	35.1
" foreign parentage	...	72.2
" colored	...	2.3
" illiterate	...	5.1
" male wage-earners (15-over)	...	26.6
" ages under 5	...	10.2
" ages 5–19	...	23.8
" ages 20–64	...	61.9
" ages 65–over	...	3.6
" ages unknown	...	0.5
Mean maximum temperature	57°	...
" minimum temperature	41°	...
" relative humidity	...	72.1
Average death-rate 1900–04	18.8	...

MORTALITY OF BOSTON, MASS., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	258,032	5,888	22.8
1872	265,764	7,990	30.1
1873	321,200	7,869	24.5
1874	331,395	7,812	23.6
1875	341,919	8,958	26.2
1876	346,005	8,203	23.7
1877	350,139	7,284	20.8
1878	354,323	7,677	20.7
1879	358,557	7,435	21.7
1880	362,839	8,531	23.5
1881	368,191	9,016	24.5
1882	373,622	8,995	24.1
1883	379,133	9,747	25.7
1884	384,725	9,622	25.0
1885	390,393	9,618	24.6
1886	401,383	9,268	23.1
1887	412,682	10,073	24.4
1888	424,299	10,197	24.0
1889	436,243	10,259	23.5
1890	448,477	10,181	22.7
1891	457,774	10,571	23.1
1892	467,264	11,236	24.0
1893	476,950	11,710	24.6
1894	486,837	11,520	23.7
1895	496,920	11,329	22.8
1896	509,104	11,634	22.9
1897	521,587	11,154	21.4
1898	534,376	10,886	20.4
1899	547,479	11,167	20.4
1900	560,892	11,678	20.8
1901	574,633	11,305	19.7
1902	588,711	10,983	18.7
1903	603,134	10,632	17 6
1904	617,910	10,757	17.4

BALTIMORE, MD.

Latitude, 39° 18′; longitude, 76° 37′. Elevation, 48 feet.

		Per Cent.
Land area, in acres	19,303	...
Population in 1900, white	429,218	...
Population in 1900, colored	79,739	...
Density per acre	...	26.4
Rate of annual increase of population, white	...	1.7
Rate, of annual increase of population, colored	...	1.8
Proportion of males in total population, white	...	48.4
" males in total population, colored	...	44.6
" foreign born, etc., see next page.		
Mean maximum temperature	63°	...
" minimum temperature	47°	...
" relative humidity	...	69.5
Average annual death-rate 1900–04 (white)	17.8	...

MORTALITY OF BALTIMORE, MD. (WHITE), 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	232,448	5,751	24.7
1872	197,658 *	6,107	30.9
1873	242,025	6,114	25.3
1874	246,955	5,980	24.2
1875	251 980	5,791	23.0
1876	257,104	5,713	22.2
1877	306,049 †	6,941	22.7
1878	267,654	5,159	19.3
1879	273,082	5,883	21.5
1880	278,597	6,170	22.1
1881	286,394	6,719	23.5
1882	294,408	6,833	23.2
1883	302,644	7,125	23.5
1884	311,110	6,398	20.6
1885	319,811	6 324	19.8
1886	328,754	6,477	19.7
1887	337,946	6,380	18.9
1888	347,393	6,894	19.8
1889	357,103	6,819	19.1
1890	367,335	8,026	21.8
1891	373,098	7,838	21.0
1892	378,952	8.361	22.1
1893	384,898	7,370	19.1
1894	390,937	7,242	18.5
1895	397,071	7,884	19.9
1896	403,301	7,612	18.9
1897	409,629	7,163	17.5
1898	416,056	7,918	19.0
1899	422,584	7,765	18.4
1900	429,218	8,093	18.9
1901	435,952	7,856	18.0
1902	442,792	7,733	17.5
1903	449,739	7,659	17.0
1904	456,795	8,096	17.7

* Mortality for 10 months only. † Mortality for 14 months only.

BALTIMORE, MD.—*Continued.*

		Per Cent.
Proportion of foreign-born		13.5
"	foreign parentage	38.2
"	colored	15.7
"	illiterate, white	3.5
"	illiterate, colcred	25.8
"	male wage-earners (15-over)	30.3
		White. *Colored.*
"	ages under 5	10.2 8.4
"	ages 5–19	29.9 26.9
"	ages 20–64	55.6 61.6
"	ages 65–over	4.1 2.5
"	ages unknown	0.2 0.6

MORTALITY OF BALTIMORE, MD.
(COLORED).
1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	40,788	1,390	34.1
1872	35,048 *	1,439	40.9
1873	43,365	1,703	39.3
1874	44,714	1,421	31.8
1875	46,105	1,526	33.1
1876	47,539	1,669	35.1
1877	57,186 †	2,081	36.4
1878	50,541	1,574	31.1
1879	52,113	1,735	33.3
1880	53,729	1,873	34.9
1881	54,925	2,097	38.2
1882	56,161	2,045	36.4
1883	57,425	2,255	39.3
1884	58,717	1,895	32.3
1885	60,038	1,829	30.5
1886	61,389	1,862	30.3
1887	62,770	1,992	31.7
1888	64,182	2,042	31.8
1889	65,626	1,884	28.7
1890	67,296	2,172	32.3
1891	68,272	2,235	32.7
1892	69,460	2,221	32.0
1893	70,669	2,184	30.9
1894	71,899	2,244	31.2
1895	73,150	2,417	33.0
1896	74,423	2,307	31.0
1897	75,718	2,166	28.6
1898	77,035	2,467	32.2
1899	78,375	2,387	30.5
1900	79,739	2,607	32.7
1901	81,148	2,623	32.3
1902	82,581	2,520	30.5
1903	84,039	2,482	29.5
1904	85,523	2,722	31.8

* Mortality for 10 months only. † Mortality for 14 months only.

CLEVELAND, OHIO.

Latitude, 41° 30′; longitude, 81° 42′. Elevation, 582 feet.

		Per Cent.
Land area, in acres	21,778	...
Population in 1900	381,768	...
Density per acre	...	17.5
Rate of annual increase of population	...	4.6
Proportion of males in total population	...	50.5
" foreign-born	...	32.6
" foreign parentage	...	75.6
" colored	...	1.6
" illiterate	...	4.7
" male wage-earners (15-over)	...	37.3
" ages under 5	...	11.1
" ages 5–19	...	30.0
" ages 20–64	...	55 7
" ages 65–over	...	3.0
" ages unknown	...	0 2
Mean maximum temperature	57°	...
" minimum temperature	42°	...
" relative humidity	...	72.9
Average death-rate 1900–04	15.2	...

MORTALITY OF CLEVELAND, OHIO, 1873–1904.

	Population.	Deaths.	Rate per 1,000.
1871	98 027		
1872	103,517		
1873	109,314	2,641	24.2
1874	115,436	2,344	20.3
1875	121,900	2,962	24.3
1876	128,726	3,227	25.1
1877	135,935	3,903	28.7
1878	143,547	2,710	18.9
1879	151,586	3,038	20.0
1880	160,146	3,446	21.5
1881	168,185	3,727	22 2
1882	176,628	3,563	20.2
1883	185,495	3,399	18.3
1884	194 807	3,732	19.2
1885	204,586	3,574	17.5
1886	214,856	3,525	16.4
1887	225,642	4,139	18.3
1888	236,969	4,414	18.6
1889	248,865	4,414	17.7
1890	261,353	5,058	19.4
1891	271,441	5,204	19.2
1892	281,918	5,227	18.5
1893	292,800	5,261	18.0
1894	304,102	5,663	18.6
1895	315,840	5,167	16.4
1896	328,031	4,859	14.8
1897	340,692	5,007	14.7
1898	353,842	5,040	14.0
1899	367,500	5,556	15.1
1900	381,768	6,104	16.0
1901	396,504	5,834	14.7
1902	411,809	6,134	14.9
1903	427,704	6,799	15.9
1904	444,213	6,476	14.6

BUFFALO, N.Y.

Latitude, 42° 53′; longitude, 78° 53′. Elevation, 582 feet.

		Per Cent.
Land area, in acres	26,885	...
Population in 1900	352,387	...
Density per acre	13.1	...
Rate of annual increase of population	...	3.8
Proportion of males in total population	...	49.6
" foreign-born	...	29.6
" foreign parentage	...	73.8
" colored	...	0.5
" illiterate	...	4.8
" male wage-earners (15-over)	...	31.3
" ages under 5	...	11.7
" ages 5-19	...	30.7
" ages 20-64	...	54.2
" 65-over	...	3.3
" ages unknown	...	0.1
Mean maximum temperature	54°	...
" minimum temperature	40°	...
" relative humidity	...	73.4
Average death-rate 1900-04	14.3	...

MORTALITY OF BUFFALO, N.Y., 1878-1904.

	Population.	Deaths.	Rate per 1,000.
1871	120,904		
1872	124,180		
1873	127,545		
1674	131,001		
1875	134,557		
1876	138,439		
1877	142,433		
1878	146,542	2,128	14.5
1879	150,770	2,068	13.7
1880	155,134	2,436	15.7
1881	163,077	3,992	24.5
1882	171,427	4,212	24.6
1883	180,204	3,517	19.5
1884	189,430	3,967	20.9
1885	199,129	3,729	18.7
1886	209,329	3,869	18.5
1887	220,041	4,688	21.3
1888	231,307	4,929	21.3
1889	232,491	4,328	18.6
1890	255,664	5,024	19.7
1891	263,981	6,001	22.7
1892	272,568	5,697	20.9
1893	281,435	5,711	20.2
1894	290,590	5,280	18.2
1895	300,043	4,684	15.6
1896	309,803	4,452	14.4
1897	319,881	4,475	14.0
1898	330,287	4,531	13.7
1899	341,031	4,661	13.7
1900	352,387	4,998	14.2
1901	363,850	5,360	14.7
1902	375,686	5,138	13.7
1903	387,907	5,681	14.6
1904	400,525	5,724	14.3

SAN FRANCISCO, CAL.

Latitude, 37° 47′; longitude, 121° 24′. Elevation, 8 feet.

		Per Cent.
Land area, in acres	29,760	...
Population in 1900	342,782	...
Density per acre	11.5	...
Rate of annual increase of population	...	1.5
Proportion of males in total population	...	53.9
" foreign-born	...	34.1
" foreign parentage	...	75.2
" colored	...	5.1
" illiterate	...	3.1
" male wage-earners (15–over)	...	22.3
" ages under 5	...	7.6
" ages 5–19	...	23.4
" ages 20–64	...	63.8
" ages 65–over	...	3.9
" ages unknown	...	1.3
Mean maximum temperature	62°	...
" minimum temperature	50°	...
" relative humidity	...	79.9
Average death-rate 1900–04	20.3	...

MORTALITY OF SAN FRANCISCO, CAL., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	156,319	3,214	20.6
1872	163,478	2,998	18.3
1873	170,965	3,641	21.3
1874	178,795	4,013	22.4
1875	186,984	4,163	22.3
1876	195,548	4,791	24.5
1877	204,504	6,170	30.2
1878	213,870	4,977	23.3
1879	223,665	4,493	20.1
1880	233,959	4,340	18.6
1881	239,761	4,287	17.9
1882	245,707	5,008	20.4
1883	251 801	4,988	19.8
1884	258,045	5,000	19 4
1885	264,445	5 288	20.0
1886	271,113	5,322	19.6
1887	277,837	5,359	19.3
1888	284,727	6,036	21.2
1889	291,788	5,729	19.6
1890	298,997	6,378	21.3
1891	303,108	6,650	21.9
1892	307,276	6,911	22.5
1893	311,501	6,061	19.5
1894	315,784	6,060	19.2
1895	320,126	6,059	18.9
1896	324,527	5,966	18.4
1897	328,989	6,150	18.7
1898	333,513	6,544	19.6
1899	338,099	7,105	21.0
1900	342,782	6,774	19.8
1901	347,495	7,008	20.2
1902	352,273	6,993	19.9
1903	357,116	7,615	21.3
1904	362,026	7,449	20.6

CINCINNATI, OHIO.

Latitude, 39° 6′; longitude, 84° 30′. Elevation, 490 feet.

		Per Cent.
Land area, in acres	22,639	...
Population in 1900	325,902	...
Density per acre	14.4	...
Rate of annual increase of population	...	1.0
Proportion of males in total population	...	48.2
" foreign-born	...	17.8
" foreign parentage	...	60.7
" colored	...	4.4
" illiterate	...	3.4
" male wage-earners (15-over)	...	42.4
" ages under 5	...	9.2
" ages 5–19	...	28.8
" ages 20–64	...	57.9
" ages 65-over	...	4.0
" ages unknown	...	0.1
Mean maximum temperature	64°	...
" minimum temperature	47°	...
" relative humidity	...	69.0
Average death-rate 1900–04	18.4	...

MORTALITY OF CINCINNATI, OHIO, 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	219,839	4,898	22.3
1872	223,499	5,116	22.9
1873	227,220	5,641	24.8
1874	231,003	5,321	23.0
1875	234,849	5,404	23.0
1876	238,759	5,710	23.9
1877	242,734	4,428	18.2
1878	246,676	4,823	19.6
1879	250,683	5 290	21.1
1880	255,139	5,177	20.3
1881	259,043	6,101	23.6
1882	263,006	6,873	26.1
1883	267,030	5,916	22.2
1884	271,116	5,667	20.9
1885	275,264	5,973	21.7
1886	279,476	6,170	22.1
1887	283,752	6,490	22.9
1888	288,093	5,994	20.8
1889	292,501	5,922	20.2
1890	296,908	6,441	21.7
1891	299,684	6,635	22.1
1892	302,486	6,015	19.9
1893	305,314	6,092	20.0
1894	308,069	5,945	19.3
1895	310,949	6,096	19.6
1896	313,856	5,916	18.8
1897	316,791	5,565	17.6
1898	319,752	5,585	17.5
1899	322,742	6,000	18.6
1900	325,902	5,412	16.6
1901	328,949	6,155	18.7
1902	332,024	5,744	17.3
1903	335,128	6,201	18.5
1904	338,261	7,038	20.8

PITTSBURG, PA.

Latitude, 40° 26′; longitude, 80° 0′. Elevation, 743 feet.

		Per Cent.
Land area, in acres	18,171	...
Population in 1900	321,616	...
Density per acre	17.7	...
Rate of annual increase of population	...	3.5
Proportion of males in total population	...	51.5
" foreign-born	...	26.4
" foreign parentage	...	63.8
" colored	...	5.3
" illiterate	...	6.3
" male wage-earners (15–over)	...	54.6
" ages under 5	...	11.5
" ages 5–19	...	29.4
" ages 20–64	...	56.6
" ages 65–over	...	2.4
" ages unknown	...	0.1
Mean maximum temperature	62°	...
" minimum temperature	44°	...
" relative humidity	...	72.2
Average death-rate 1900–04	20.3	...

MORTALITY OF PITTSBURG, PA., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	91,404	2,531	27.7
1872	97,062	2,456	25.3
1873	103,070	3,519	34.1
1874	109,450	3,381	30.9
1875	116,225	2,957	25.4
1876	123,419	2.896	23.5
1877	131,059	3,408	26.0
1878	139,172	3,068	22.0
1879	147,787	2,923	19.8
1880	156,389	3,410	21.8
1881	163,137	4,493	27.5
1882	170,176	4,090	24.0
1883	177,519	3,318	18.7
1884	185,178	3,753	20.3
1885	193,168	3,840	19.9
1886	201,503	4,225	21.3
1887	210,198	4,713	22.4
1888	219,268	4,189	19.1
1889	228,729	4,286	18.7
1890	238,617	4,979	20.9
1891	245,847	5,832	23.7
1892	253,396	5,478	21.6
1893	261,074	5,902	22.6
1894	268,985	4,973	18.5
1895	277,135	5,004	18 1
1896	285,532	4,907	17.2
1897	294,183	4,745	16.1
1898	303,097	5,114	16.9
1899	312,281	5,818	18.6
1900	321,616	6,263	19.5
1901	331,360	6,592	19.9
1902	341,400	7,413	21.7
1903	351,744	7,476	21.3
1904	362,401	6,975	19.2

NEW ORLEANS, LA.

Latitude, 29° 57′; longitude, 90° 4′. Elevation, 4 feet

		Per Cent.
Land area, in acres	125,600	...
Population in 1900, white	208,946	...
Population in 1900, colored	78,158	...
Density per acre	2.3	...
Rate of annual increase of population, white	...	1.8
Rate of annual increase of population, colored	...	2.1
Proportion of males in total population, white	...	48.1
" males in total population, colored	...	45.5
" foreign born, etc., see next page.		
Mean maximum temperature	76°	
" minimum temperature	62°	
" relative humidity		77.3
Average annual death-rate 1900–04 (white)	19.2	...

MORTALITY OF NEW ORLEANS, LA. (WHITE), 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	142,623	3,782	26.5
1872	144,304	3 871	26.8
1873	146,004	4,739	32.5
1874	147,725	4,366	29.6
1875	149,466	3,869	25.9
1876	151,227	4,031	26.7
1877	153,010	3,976	26.0
1878	154,813	8,026	52.1
1879	157,637	3,267	20.7
1880	158,473	3,637	23.0
1881	160,285	4,127	25.8
1882	162,119	3,582	22.1
1883	163,973	4,552	27.8
1884	165,849	4,366	26.3
1885	167,746	4,325	25.8
1886	169,664	4,092	24.1
1887	171,605	3,947	23 0
1888	173,568	4,022	23.8
1889	175,553	3,925	22.4
1890	177,376	4,605	26.0
1891	180,430	4,423	24.5
1892	183,358	4,747	25.9
1893	186,334	4,502	24.2
1894	189,358	4,272	22.6
1895	192,431	4,951	25.7
1896	195,554	4,499	23.0
1897	198,728	4,268	21.5
1898	201,953	4,275	21.2
1899	205,231	4,913	23.9
1900	208,946	4,318	20.7
1901	212,396	4,037	19.0
1902	215,903	4,067	18.8
1903	219,468	4,200	19.1
1904	223,091	4,222	18.9

NEW ORLEANS, LA.—*Continued.*

		Per Cent.	
Proportion of	foreign-born	10.6	
"	foreign parentage	37.6	
"	colored	27.2	
"	illiterate, white	5.0	
"	illiterate, colored	36.1	
"	male wage earners (15-over)	14.9	
		White.	*Colored.*
"	ages under 5	10.9	9.2
"	ages 5-19	31.2	30.1
"	ages 20-64	54.0	57.0
"	ages 65-over	3.8	3.6
"	unknown	0.1	0.1

MORTALITY OF NEW ORLEANS, LA.
(COLORED).
1871-1904.

	Population.	Deaths.	Rate per 1,000.
1871	51,130	2,115	41.4
1872	51,813	2,143	41.4
1873	52,505	2,684	51.1
1874	53 206	2,432	45.7
1875	53,916	2,151	39.9
1876	54,636	2,226	40.7
1877	55,365	2,732	49.4
1878	56,104	2,256	40.2
1879	56,853	1,855	32.6
1880	57,723	1,986	34.4
1881	58,286	2,279	39.1
1882	58,926	2,340	39.7
1883	59,592	2,971	49.9
1884	60,265	2,784	46.2
1885	60,946	2,348	38.5
1886	61,635	2,199	35.7
1887	62,331	2,128	34.1
1888	63,035	2,179	34.6
1889	63,747	2,150	33.7
1890	64,663	2,633	40.7
1891	65,742	2,433	37.0
1892	67,017	2,752	41.1
1893	68,317	2,654	38.9
1894	69,642	2,571	36.9
1895	70.993	3,094	43.6
1896	72,370	3,095	42.8
1897	73,774	2,462	33.4
1898	75,205	2,551	33.9
1899	76.664	2,980	38.9
1900	78,158	3,106	39.7
1901	79,646	2,441	30.7
1902	81.162	2,505	30.9
1903	82,706	2,505	30.3
1904	84,280	2,597	30.8

DETROIT, MICH.

Latitude, 42° 20′; longitude, 83° 3′. Elevation, 602 feet.

		Per Cent.
Land area, in acres	18,173	...
Population in 1900	285,704	...
Density per acre	15.7	...
Rate of annual increase of population	...	3.9
Proportion of males in total population	...	48.7
" foreign-born	...	33.8
" foreign parentage	...	77.5
" colored	...	1.4
" illiterate	...	4.1
" male wage-earners (15–over)	...	36.1
" ages under 5	...	10.9
" ages 5–19	...	30.2
" ages 20–64	...	55.4
" ages 65–over	...	3.4
" ages unknown	...	0.1
Mean maximum temperature	56°	...
" minimum temperature	41°	...
" relative humidity	...	74.4
Average death-rate 1900–04	15.7	...

MORTALITY OF DETROIT, MICH., 1883–1904.

	Population.	Deaths.	Rate per 1,000.
1871	84,519		
1872	89,768		
1873	95,343		
1874	101,255		
1875	103,624		
1876	106,049		
1877	108,520		
1878	111,059		
1879	113,658		
1880	116,340		
1881	120,290		
1882	124,378		
1883	128,596	2,831	22.0*
1884	132,956	3,062	23.0*
1885	143,007		
1886	153,818	3,386	22.0*
1887	165,447	3,653	22.1*
1888	177,955	†4,032	20.9‡
1899	191,408		
1890	205,876	3,829	18.6
1891	213,432	4,037	18.9
1892	221,265	4,770	21.6
1893	229,385		
1894	237,798		
1895	245,182	3,692	15.1§
1896	252,796	3,996	15.8
1897	260,645	4,848	18.6
1898	268,738	4,312	16.0‖
1899	277,082	4,611	16 6
1900	285,704	4,711	16.5
1901	294,575	4,856	16.5
1902	303,721	4,692	15.4
1903	313,151	4,896	15.6
1904	322,874	4,759	14.7

* Year ends May 31. † Thirteen months. ‡ Year ends June 30.
§ Year begins March. ‖ Years 1898–1904 end Dec. 31.

MILWAUKEE, WIS.

Latitude, 43° 3′; longitude, 87° 54′. Elevation, 595 feet.

		Per Cent.
Land area, in acres	13,108	...
Population in 1900	285,315	...
Density per acre	21.8	...
Rate of annual increase of population	...	4.0
Proportion of males in total population	...	49.3
" foreign-born	...	31.2
" foreign parentage	...	82.7
" colored	...	0.3
" illiterate	...	3.8
" male wage-earners (15-over)	...	41.7
" ages under 5	...	12.3
" ages 5–19	...	32.6
" ages 20–64	...	51.6
" ages 65-over	...	3.4
" ages unknown	...	0.1
Mean maximum temperature	53°	...
" minimum temperature	38°	...
" relative humidity	...	74.9
Average death-rate 1900–04	13.2	...

MORTALITY OF MILWAUKEE, WIS., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	74,962	1,743	23.3
1872	78,658	2,115	26.9
1873	82,536	2,026	24.5
1874	86,605	2,078	24.0
1875	90,875	1,651	18.2
1876	95,355	2,271	23.8
1877	100,056	2,243	22.4
1878	104,989	1,774	16.9
1879	110,165	1,965	17.8
1880	115,587	2,390	20.7
1881	122,372	2,699	22.0
1882	129,555	2,729	21.1
1883	137,160	2,532	18.5
1884	145,211	2,768	19.1
1885	153,735	2,796	18.2
1886	162,759	3,021	18.6
1887	172,313	3,257	18.9
1888	182,428	3,426	18.8
1889	193,137	3,188	16.5
1890	204,468	3,747	18.3
1891	212,729	4,689	22.0
1892	221,323	4,516	20.4
1893	230,264	4,462	19.4
1894	239,567	4,253	17.8
1895	249,290	3,885	15.6
1896	256,111	3,904	15.2
1897	263,118	3,606	13.7
1898	270,317	3,338	12.3
1899	277,713	3,843	13.8
1900	285,315	4,026	14.1
1901	293,121	3,833	13.1
1902	301,140	3,797	12.6
1903	309,379	4,091	13.2
1904	317,843	4,182	13.2

WASHINGTON, D.C.

Latitude, 38° 54′; longitude, 77° 3′. Elevation, 22 feet.

		Per Cent.
Land area, in acres	38,408	...
Population in 1900, white	191,532	...
Population in 1900, colored	87,186	...
Density per acre	7.3	...
Rate of annual increase of population, white	...	2.4
Rate of annual increase of population, colored	...	1.5
Proportion of males in total population, white	...	48.7
" males in total population, colored	...	44.5
" foreign born, etc., see next page.		
Mean maximum temperature	64°	
" minimum temperature	46°	
" relative humidity	...	72.3
Average annual death-rate 1900–04 (white)	16.6	...

MORTALITY OF DISTRICT OF COLUMBIA (WHITE), 1876–1904.

	Population.	Deaths.	Rate per 1,000.
1871	90,877		
1872	93,553		
1873	96,308		
1874	99,144		
1875	102,064		
1876	105,127	2,086	19.8
1877	108,229	2,187	20.2
1878	111,421	2,166	19.4
1879	114,708	1,990	17.3
1880	118,006	2,085	17.7
1881	121,278	2,205	18.2
1882	124,617	2,353	18.9
1883	128,947	2,270	17.6
1884	132,492	2.576	19.4
1885	136,137	2,610	19.2
1886	139,882	2,442	17.5
1887	143,729	2,484	17.3
1888	147,681	2,778	18.8
1889	151,742	2,713	17.9
1890	154,695	2,934	19.0
1891	158,149	3,106	19.6
1892	161,549	3,442	21.3
1893	165,022	3,677	22.3
1894	168.570	3,329	19.7
1895	172,194	3,114	18.1
1896	175,896	3,302	18.8
1897	179,678	3,216	17.9
1898	183,541	2,973	16.2
1899	187,487	3,372	18.0
1900	191,532	3,325	17.4
1901	195,650	3,430	17.5
1902	199,850	3,259	16.3
1903	204,147	3,192	15.6
1904	208,536	3,431	16.5

WASHINGTON, D.C.—*Continued.*

		Per Cent.
Proportion of	foreign-born	7.2
"	foreign parentage	20.9
"	colored	31.3
"	illiterate, white	1.6
"	illiterate, colored	24.2
"	male wage-earners (15–over)	20.9

		White.	*Colored.*
"	ages under 5	8.3	8.4
"	ages 5–19	24.8	27.3
"	ages 20–64	62.1	61.2
"	ages 65–over	4.7	3.0
"	ages unknown	0.1	0.1

MORTALITY OF DISTRICT OF COLUMBIA (COLORED).

1876–1904.

	Population.	Deaths.	Rate per 1,000.
1871	44,821		
1872	46,265		
1873	47,755		
1874	49,293		
1875	50,879		
1876	52,496	2,074	39.5
1877	54,186	2,021	37.3
1878	55,931	2,065	36.9
1879	57,732	2,014	34.9
1880	59,618	2,121	35.6
1881	61,026	1,931	31.6
1882	62,491	2,218	35.5
1883	63,991	2,016	31.5
1884	65,527	2,239	34.2
1885	67,100	2,388	35.6
1886	68,710	2,232	32.5
1887	70,359	2,181	31.0
1888	72,048	2,262	31.4
1889	73,777	2,439	33.1
1890	75,697	2,630	34.8
1891	76,625	2,614	34.1
1892	77,692	2,656	34.2
1893	78,774	2,775	35.2
1894	79,871	2,710	33.9
1895	80,984	2,451	30.3
1896	82,112	2,603	31.7
1897	83,256	2,521	30.3
1898	84,416	2,654	31.4
1899	85,592	2,610	30.5
1900	87,186	2,628	30.1
1901	87,995	2,657	30.2
1902	89,221	2,688	30.1
1903	90,464	2,596	28.7
1904	91,724	2,553	27.8

NEWARK, N.J.

Latitude, 40° 44′; longitude, 74° 10′. Elevation, 16 feet.

		Per Cent.
Land area, in acres	7,810	...
Population in 1900	246,070	...
Density per acre	31.5	...
Rate of annual increase of population	...	3.5
Proportion of males in total population	...	49.2
" foreign-born	...	29.0
" foreign parentage	...	68.3
" colored	...	2.8
" illiterate	...	6.1
" male wage-earners (15-over)	...	44.8
" ages under 5	...	11 4
" ages 5-19	...	28.6
" ages 20-64	...	56.4
" ages 65-over	...	3.4
" unknown	...	0.2
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900-04	19.0	...

MORTALITY OF NEWARK, N.J., 1871-1904.

	Population.	Deaths.	Rate per 1,000.
1871	107,843	2,635	24.4
1872	110,701	3,760	34.0
1873	113,635	3,735	32.9
1874	116,646	3,344	28.7
1875	119,737	3,331	27.8
1876	122,910	3,691	30.0
1877	126,167	3,328	26.4
1878	129,510	3,141	24.3
1879	132,942	3,116	23.4
1880	136,508	2,553	18.7
1881	139,656	2,884	20.7
1882	142,876	3,912	27.4
1883	146,171	3,480	23.8
1884	149,542	3,372	22.5
1885	152,988	3,729	24.4
1886	151,366	3,663	23.1
1887	163,933	3,734	22.8
1888	169,695	4,133	24.4
1889	175,660	4,253	24.2
1890	181,830	4,948	27.2
1891	188,158	4,420	23.5
1892	194,706	5,641	29.0
1893	201,482	4,900	24.3
1894	208,494	4,760	22.8
1895	215,806	4,643	21.5
1896	221,568	4,629	20.9
1897	227,484	4,496	19.8
1898	233,557	3,932	16.8
1899	239,793	4,714	18.9
1900	246,070	4,824	19.6
1901	252,713	4,826	18.9
1902	259,536	4,831	19.0
1903	266,543	4,901	18.3
1904	273,739	5,301	19.6

JERSEY CITY, N.J.

Latitude, 42° 53′; longitude, 74° 2′. Elevation, 21 feet.

		Per Cent.
Land area, in acres	9,163	...
Population in 1900	206,433	...
Density per acre	22.5	...
Rate of annual increase of population	...	2.7
Proportion of males in total population	...	50.4
" foreign-born	...	28.3
" foreign parentage	...	70.6
" colored	...	1.9
" illiterate	...	4.5
" male wage-earners (15–over)	...	21.2
" ages under 5	...	12.1
" ages 5–19	...	28.8
" ages 20–64	...	56.2
" ages 65–over	...	2.8
" ages unknown	...	0.1
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	19.6	...

MORTALITY OF JERSEY CITY, N.J., 1875–1904.

	Population.	Deaths.	Rate per 1,000.
1871	87,301		
1872	92,330		
1873	97,648		
1874	103,273		
1875	109,227	2,836	26.0
1876	111,433	2,988	26.8
1877	113,684	2,548	22.4
1878	115,980	2,409	20.8
1879	118,323	2,408	20.4
1880	120,722	2,709	22.4
1881	126,662	3,324	26.2
1882	132,894	3.464	26.1
1883	139,432	3,064	22.0
1884	146,292	3,169	21.7
1885	153,513	3,491	22.7
1886	155,371	3,593	23.1
1887	157,251	3,872	24.6
1888	159,154	3,926	24.7
1889	161,080	4,020	25 0
1890	163,003	4,257	26.1
1891	166,768	4,668	28.0
1892	170,620	4,610	27.0
1893	174,560	4,492	25.7
1894	178,592	4,354	24.4
1895	182,713	4,325	23.7
1896	187,226	4,357	23.3
1897	191,850	4,633	24.1
1898	196,589	3 899	19.8
1899	201,445	3,840	19.1
1900	206,433	4,236	20.5
1901	211,531	4,021	19.0
1902	216,755	4,059	18.7
1903	222,108	4,136	18.6
1904	227,594	4,766	21.0

LOUISVILLE, KY.

Latitude, 38° 15′; longitude, 85° 45′. Elevation, 435 feet.

		Per Cent.
Land area, in acres	12,732	...
Population in 1900, white	165,590	...
Population in 1900, colored	39,141	...
Density per acre	16.1	...
Rate of annual increase of population, white	...	2.5
Rate of annual increase of population, colored	...	3.7
Proportion of males in total population, white	...	48.7
" males in total population, colored	...	48.1
" foreign born, etc., see next page.		
Mean maximum temperature	66°	
" minimum temperature	48°	
" relative humidity	...	67.5
Average annual death-rate 1900–1904 (white)	15.1	...

MORTALITY OF LOUISVILLE, KY. (WHITE), 1890–1904.

	Population.	Deaths.	Rate per 1,000.
1871	87,365		
1872	88,963		
1873	90,591		
1874	92,248		
1875	93,935		
1876	95,653		
1877	97,402		
1878	99,183		
1879	100,997		
1880	102,847		
1881	105,509		
1882	108,216		
1883	110,992		
1884	113,838		
1885	116,756		
1886	119,748		
1887	122,806		
1888	125,951		
1889	129,176		
1890	132,478	2,336	17.6
1891	135,467	2,288	16.9
1892	138,523	2,486	17.9
1893	141,648	2,423	17.1
1894	144,844	2,344	16.2
1895	148,112	2,496	16.9
1896	151,453	2,443	16.1
1897	154,870	2,295	14.8
1898	158,364	2,192	13.8
1899	161,937	2,590	16.0
1900	165,590	2,304	13.9
1901	169,326	2,582	15.2
1902	173,146	2,605	15.0
1903	177,052	2,722	15.4
1904	181,046	2,875	15.9

LOUISVILLE, KY.—*Continued.*

	Per Cent.
Proportion of foreign-born	10.5
" foreign parentage	37.7
" colored	19.1
" illiterate, white	3.1
" illiterate, colored	31.1
" male wage-carners (15–over)	33.1

	White.	*Colored.*
" ages under 5	9.8	7.1
" ages 5–19	29.0	24.9
" ages 20–64	57.0	64.3
" ages 65–over	3.9	2.8
" unknown	0.3	0.9

MORTALITY OF LOUISVILLE, KY.
(COLORED).
1890–1904.

	Population.	Deaths.	Rate per 1,000.
1871	15,481		
1872	16,019		
1873	16,571		
1874	17,140		
1875	17,725		
1876	18,326		
1877	18,944		
1878	19,580		
1879	20,233		
1880	20,911		
1881	21,574		
1882	22,264		
1883	22,976		
1884	23,711		
1885	24,470		
1886	25,253		
1887	26,061		
1888	26,895		
1889	27,756		
1890	28,672	825	28.8
1891	29,559	799	27.0
1892	30,496	898	29.4
1893	31,462	843	26.8
1894	32,459	796	24.5
1895	33,488	873	26.1
1896	34,549	852	24.7
1897	35,644	810	22.7
1898	36,774	866	23.5
1899	37,939	929	24.5
1900	39,141	976	24.9
1901	40,367	935	23 2
1902	41,629	1,004	24.1
1903	42,928	1,060	24.7
1904	44,266	1,217	27.5

MINNEAPOLIS, MINN.

Latitude, 44° 58′; longitude, 93° 16′. Elevation, 812 feet.

		Per Cent.
Land area, in acres	31,622	...
Population in 1900	202,718	...
Density per acre	6.4	...
Rate of annual increase of population	...	2.3
Proportion of males in total population	...	50.9
" foreign-born	...	30.1
" foreign parentage	...	69.0
" colored	...	0.8
" illiterate	...	1.8
" male wage-earners (15-over)	...	30.6
" ages under 5	...	10.2
" ages 5–19	...	27.9
" ages 20–64	...	58.8
" ages 65-over	...	2.9
" ages unknown	...	0.2
Mean maximum temperature	54°	...
" minimum temperature	36°	...
" relative humidity (not available)	...	...
Average death-rate 1900–04	11.3	...

MORTALITY OF MINNEAPOLIS, MINN., 1871–1904.

	Population.	Deaths	Rate per 1,000.
1871	14,847	208	14.0
1872	16,871	390	23.1
1873	19,171	377	19.7
1874	21,784	528	24.2
1875	24,753	526	21.2
1876	28,127	450	16.0
1877	31,961	425	13.3
1878	36,317	448	12.3
1879	41,267	727	17.6
1880	46,887	732	15.6
1881	53,160	1,237	23.3
1882	60,273	1,697	28.2
1883	68,338	1,677	24.5
1884	77,482	1,784	23.0
1885	87,849	1,624	18.5
1886	99,603	2,213	22.2
1887	112,930	2,391	21.2
1888	128,040	2,879	22.5
1889	145,172	2,273	15.7
1890	164,738	2,556	15.5
1891	168,197	2,177	12.9
1892	171,729	2,258	13.1
1893	175,335	2,223	12.7
1894	179,017	2,069	11.6
1895	182,776	2,186	12.0
1896	186,614	2,044	11.0
1897	190,533	1,971	9.5
1898	194,534	2,159	10.0
1899	198,619	2,181	11.0
1900	202,718	2,289	11.3
1901	206,975	2,510	12.1
1902	211,321	2,259	10.7
1903	215,758	2,458	11.4
1904	220,288	2,398	10.9

PROVIDENCE, R.I.

Latitude, 41° 49′; longitude, 71° 25′. Elevation, 11 feet.

		Per Cent.
Land area, in acres	10,384	...
Population in 1900	175,597	...
Density per acre	16.9	...
Rate of annual increase of population	...	3.3
Proportion of males in total population	...	48.4
" foreign-born	...	31.8
" foreign parentage	...	66.5
" colored	...	2.9
" illiterate	...	7.0
" male wage-earners (15–over)	...	50.5
" ages under 5	...	9.7
" ages 5–19	...	25.3
" ages 20–64	...	60.8
" ages 65–over	...	4.0
" ages unknown	...	0.2
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	19.0	...

MORTALITY OF PROVIDENCE, R.I., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	74,478	1,254	16.8
1872	80,503	1,603	19.9
1873	87,016	1,719	19.8
1874	94 056	1,987	21.1
1875	100,675	1,915	19.0
1876	101,501	1,865	18.4
1877	102,333	1,938	18.9
1878	103,172	1 989	19.3
1879	104,018	2 026	19.5
1880	104,857	2.080	19.8
1881	107,374	2,145	20.0
1882	109,951	2,242	20.4
1883	112,590	2,328	20.7
1884	115,292	2,233	19.4
1885	118,070	2,164	18.3
1886	120,762	2,355	19.5
1887	123,515	2,612	21.1
1888	126,331	2,608	20.6
1889	129,211	2,510	19.4
1890	132,146	2,877	21.8
1891	134,710	2.630	19.5
1892	137,323	2,964	21.6
1893	139,987	3,139	22.4
1894	142,703	2,896	20.3
1895	145,472	3,087	21.2
1896	151,051	2,955	19.6
1897	156,844	2,805	17.9
1898	162,859	2,928	18.0
1899	169,105	3,162	18.7
1900	175,597	3,678	20.9
1901	182,331	3,444	18.9
1902	189,323	3,394	17.9
1903	196,583	3,895	19.8
1904	204,121	3,593	17.6

INDIANAPOLIS, IND.

Latitude, 39° 46′; longitude, 86° 10′. Elevation, 708 feet.

		Per Cent.
Land area, in acres	17,058	...
Population in 1900	169,164	...
Density per acre	9.9	...
Rate of annual increase of population	...	6.0
Proportion of males in total population	...	49.4
" foreign-born	...	10.1
" foreign parentage	...	32.8
" colored	...	9.4
" illiterate	...	4.3
" male wage-earners (15–over)	...	34.8
" ages under 5	...	8.6
" ages 5–19	...	26.7
" ages 20–64	...	60.5
" 65–over	...	3.6
" ages unknown	...	0.6
Mean maximum temperature	62°	...
" minimum temperature	44°	...
" relative humidity	...	69.2
Average death-rate 1900–04	15.5	...

MORTALITY OF INDIANAPOLIS, IND., 1891–1904.

	Population.	Deaths.	Rate per 1,000.
1871	50,425		
1872	52,704		
1873	55,086		
1874	57,576		
1875	60,178		
1876	62,794		
1877	65,632		
1878	68,599		
1879	71,700		
1880	75,056		
1881	77,649		
1882	80,332		
1883	83,107		
1884	85,978		
1885	88,949		
1886	92,022		
1887	95,201		
1888	98,490		
1889	101,893		
1890	105,436		
1891	110,539	2,128	19.3
1892	115,889	1,985	17.1
1893	121,498	2,070	17.0
1894	127,379	1,834	14.4
1895	133,543	2,237	16.8
1896	140,006	2,057	14.7
1897	146,582	2,112	14.4
1898	153,677	2,251	14.6
1899	161,115	2,388	14.8
1900	169,164	2,626	15.5
1901	177,351	2,497	14.1
1902	185,934	2,492	13.4
1903	194,933	3,667	18.8
1904	204,367	3,193	15.6

KANSAS CITY, MO.

Latitude, 39° 6′; longitude, 94° 35′. Elevation, 750 feet.

		Per Cent.
Land area, in acres	16,209	...
Population in 1900	163,752	...
Density per acre	10.1	...
Rate of annual increase of population	...	2.3
Proportion of males in total population	...	50.5
" foreign-born	...	11.2
" foreign parentage	...	31.7
" colored	...	10.8
" illiterate	...	3.9
" male wage-earners (15-over)	...	19.1
" ages under 5	...	8.2
" ages 5–19	...	26.1
" ages 20–64	...	62.9
" ages 65-over	...	2.7
" ages unknown	...	0.1
Mean maximum temperature	64°	...
" minimum temperature	45°	...
" relative humidity	...	70.3
Average death-rate 1900–04	16.6	...

MORTALITY OF KANSAS CITY, MO., 1884–1904.

	Population.	Deaths.	Rate per 1,000.
1871	34,076		
1872	35,994		
1873	38 020		
1874	40,161		
1875	42,422		
1876	44,813		
1877	47,335		
1878	50,000		
1879	52,815		
1880	55,785		
1881	60,822		
1882	66,314		
1883	72,302		
1884	78,831	952	12.1
1885	85,949	1,229	14.3
1886	93,710	1,674	17.9
1887	102,172	2,179	21.3
1888	111,398	2,411	21 6
1889	121,457	1,916	15.8
1890	132.716	2,101	15.8
1891	135,435	1,643	12.1
1892	138,311	1,621	11.7
1893	141,249	1,741	12.3
1894	144,249	1,643	11.4
1895	147,312	1,762	12.0
1896	150,441	1,804	17.0
1897	153,636	1,954	12.7
1898	156,899	2,181	13.9
1899	160,231	2,694	16.8
1900	163,752	2,412	14.7
1901	167,230	2,625	15.7
1902	170,781	2,678	15.7
1903	174,408	2,998	17.2
1904	178,112	3,454	19.4

ST. PAUL, MINN.

Latitude, 44° 57′; longitude, 93° 6′. Elevation, 703 feet.

		Per Cent.
Land area, in acres	33,954	...
Population in 1900	163,065	...
Density per acre	4.8	...
Rate of annual increase of population	...	2.3
Proportion of males in total population	...	51.8
" foreign-born	...	28.7
" foreign parentage	...	72.6
" colored	...	1.4
" illiterate	...	3.1
" male wage-earners (15-over)	...	22.9
" ages under 5	...	10.4
" ages 5–19	...	29.4
" ages 20–64	...	56.7
" ages 65-over	...	2.8
" ages unknown	...	0.7
Mean maximum temperature	53°	...
" minimum temperature	35°	...
" relative humidity	...	71.9
Average death-rate 1900–04	9.5	...

MORTALITY OF ST. PAUL, MINN., 1874–1904.

	Population.	Deaths.	Rate per 1,000.
1871	21,541		
1872	23,166		
1873	24,902		
1874	26 781	583	21.8
1875	28,802	501	17.4
1876	30,975	592	19.1
1877	33,312	492	14.8
1878	35,828	483	13.5
1879	38,531	490	12.7
1880	41,473	693	16.7
1881	46 603	1,167	25.0
1882	52,368	1,322	25.2
1883	58,846	1,304	22.2
1884	66,125	1,567	23.7
1885	74,305	1,346	18.1
1886	83,497	1,519	18.2
1887	93,826	1,918	20 4
1888	105,432	2,078	19.7
1889	118,474	1,887	15.3
1890	133,156	1,696	12.7
1891	135,926	1,769	13.0
1892	138,753	1,752	12.6
1893	141,639	1,585	11.2
1894	144,585	1,570	10.9
1895	147,592	1,629	11.0
1896	150,662	1,434	9.5
1897	153,796	1,387	9.0
1898	156,995	1,737	11.1
1899	160,260	1,570	9.8
1900	163,065	1,590	9.8
1901	167,035	1,570	9.4
1902	170,509	1,606	9.4
1903	174,055	1,606	9.2
1904	177,675	1,707	9.6

ROCHESTER, N.Y.

Latitude, 43° 9′; longitude, 77° 37′. Elevation, 510 feet.

		Per Cent.
Land area, in acres	11,391	...
Population in 1900	162,608	...
Density per acre	14.3	...
Rate of annual increase of population	...	2.1
Proportion of males in total population	...	47.7
" foreign-born	...	25.1
" foreign parentage	...	67.4
" colored	...	0.4
" illiterate	...	2.7
" male wage-earners (15–over)	...	41.7
" ages under 5	...	9.4
" ages 5–19	...	28.6
" ages 20–64	...	57.4
" ages 65–over	...	4.4
" ages unknown	...	0.2
Mean maximum temperature	55°	...
" minimum temperature	39°	...
" relative humidity	...	73.4
Average death-rate 1900–04	13.3	...

MORTALITY OF ROCHESTER, N.Y., 1877–1904.

	Population.	Deaths.	Rate per 1,000.
1871	65,845		
1872	69,496		
1873	73,347		
1874	77,414		
1875	81,722		
1876	83,193		
1877	84,690	1,323	15.6
1878	86,214	1,291	15.0
1879	87,766	1,471	16.8
1880	89,366	1 719	19.2
1881	93,057	1 909	20.5
1882	96,900	1 835	18.9
1883	100,902	1,769	17.5
1884	105,069	1,707	16.2
1885	109,408	1,888	17.3
1886	113,927	1,948	17.1
1887	118,632	2,124	17.9
1888	123,532	2,058	16.7
1889	128,633	2,079	16.2
1890	133,896	2,265	16.9
1891	136,507	2,505	18.4
1892	139,169	2,751	19.8
1893	141,883	2,568	18.1
1894	144,650	2,181	15.1
1895	147,471	2,382	16.2
1896	150,347	2,301	15.3
1897	153,279	2,076	13.5
1898	156,268	2,191	14.0
1899	159,315	2,286	14.4
1900	162,608	2,272	14.0
1901	165,602	2,385	14.4
1902	168,831	2,303	13.7
1903	172,123	2,525	14.7
1904	175,479	2,670	15.2

DENVER, COL.

Latitude, 39° 45′; longitude, 105° 0′. Elevation, 5,183 feet.

		Per Cent.
Land in area, acres	30,762	...
Population in 1900	133,859	...
Density per acre	4.4	...
Rate of annual increase of population	...	2.5
Proportion of males in total population	...	49.7
" foreign-born	...	18.9
" foreign parentage	...	47.2
" colored	...	3.2
" illiterate	...	1.8
" male wage-earners (15–over)	...	20.3
" ages under 5	...	8.5
" ages 5–19	...	26.3
" ages 20–64	...	60.8
" age 65–over	...	2.8
" ages unknown	...	1.6
Mean maximum temperature	63°	...
" minimum temperature	37°	...
" relative humidity	...	48.7
Average death-rate 1900–04	19.3	...

MORTALITY OF DENVER, COL., 1886–1904.

	Population.	Deaths.	Rate per 1,000.
1871	5,820		
1872	7,118		
1873	8,705		
1874	10,646		
1875	13,020		
1876	15,923		
1877	19,474		
1878	23,817		
1879	29,128		
1880	35,629		
1881	39,762		
1882	44,374		
1883	49,521		
1884	55,265		
1885	61,676		
1886	68,830	1,119	16.3
1887	76,814	1,525	19.9
1888	85,724	1,729	20.2
1889	95,668	1,808	18.9
1890	106,713	2,530	23.7
1891	109,157	2,118	19.4
1892	111,657	1,713	15.3
1893	114,214	1,734	15.2
1894	116,829	1,688	14.3
1895	119,504	1,626	13.6
1896	122,241	1,571	12.9
1897	125,040	1,838	14.7
1898	127,903	1,928	15.1
1899	130,832	2,153	16.5
1900	133,859	2,347	17.5
1901	136,924	2,777	20.3
1902	140,059	2,605	18.6
1903	143,266	2,749	19.2
1904	146,546	3,020	20.6

TOLEDO, OHIO.

Latitude, 41° 39′; longitude, 83° 32′. Elevation, 587 feet.

		Per Cent.
Land area, in acres	15,924	...
Population in 1900	131,822	...
Density per acre	8.3	...
Rate of annual increase of population	...	6.2
Proportion of males in total population	...	49.8
" foreign-born	...	21.1
" foreign parentage	...	59.2
" colored	...	1.3
" illiterate	...	3.7
" male wage-earners (15–over)	...	28.2
" ages under 5	...	10.6
" ages 5–19	...	29.7
" ages 20–64	...	56.3
" ages 65–over	...	3.3
" ages unknown	...	0.1
Mean maximum temperature	58°	...
" minimum temperature	42°	...
" relative humidity	...	73.9
Average death-rate, 1900–04	12.3	...

MORTALITY OF TOLEDO, OHIO, 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	33,078	453	13.7
1872	34,643	749	21.6
1873	36,282	616	17.0
1874	37,998	600	15.8
1875	39,795	709	17.8
1876	41,677	740	17.8
1877	43,648	715	16.4
1878	45,713	657	14.4
1879	47,875	773	16.1
1880	50,137	834	16.6
1881	52,626	972	18.5
1882	55,139	865	15.7
1883	57,877	821	14.2
1884	60,751	917	15.1
1885	63,767	926	14.5
1886	66,933	935	14.0
1887	70,256	1,037	14.8
1888	73,744	1,095	14.8
1889	77,405	1,208	15.6
1890	81,434	1,374	16.9
1891	85,449	1,383	16.2
1892	89,662	1,433	16.0
1893	94,082	1,484	15.8
1894	98,720	1,493	15.1
1895	103,587	1,483	14.3
1896	108,590	1,473	13.6
1897	113,943	1,523	13.4
1898	119,560	1,564	13.1
1899	125,454	1,832	14.6
1900	131,822	1,847	14.0
1901	138,320	1,713	12.4
1902	145,139	1,732	11.9
1903	152,294	1,849	12.1
1904	159,802	1,784	11.2

ALLEGHENY, PA.

Latitude, 40° 27′; longitude, 80° 1′. Elevation, 736 feet.

		Per Cent.
Land area, in acres	4,639	...
Population in 1900	129,896	...
Density per acre	28.0	...
Rate of annual increase of population	...	2.3
Proportion of males in total population	...	51.3
" foreign-born	...	23.3
" foreign parentage	...	60.7
" colored	...	2.6
" illiterate	...	4.5
" male wage-earners (15–over)	...	37.8
" ages under 5	...	10.6
" ages 5–19	...	28.6
" ages 20–64	...	57.8
" ages 65–over	...	2.9
" ages unknown	...	0.1
Mean maximum temperature } See Pittsburg.		
" minimum temperature } See Pittsburg.		
" relative humidity } See Pittsburg.		
Average death-rate 1900–04	18.7	...

MORTALITY OF ALLEGHENY, PA., 1890–1904.

	Population.	Deaths.	Rate per 1,000.
1871	55,307		
1872	57,519		
1873	59,820		
1874	62,213		
1875	64,702		
1876	67,290		
1877	69,982		
1878	72,781		
1879	75,692		
1880	78,682		
1881	81,011		
1882	83,409		
1883	85,878		
1884	88,420		
1885	91,037		
1886	93,732		
1887	96,506		
1888	99,363		
1889	102,304		
1890	105,287	1,918	18.2
1891	107,748	1,915	17.8
1892	110,209	2,217	20.1
1893	112,670	2,284	20.3
1894	115,131	1,962	17.0
1895	117,592	2,361	20.1
1896	120,053	1,859	15.5
1897	122,514	2,217	18.1
1898	124,975	1,962	15.7
1899	127,436	2,109	16.5
1900	129,896	2,296	17.7
1901	132,358	2,425	18.3
1902	134,819	2,555	18.9
1903	137,280	2,627	19.1
1904	139,741	2,678	19.2

COLUMBUS, OHIO.

Latitude, 39° 58′; longitude, 83° 0′. Elevation, 743 feet.

		Per Cent.
Land area, in acres	10,577	...
Population in 1900	125,560	...
Density per acre	11.9	...
Rate of annual increase of population	...	4.2
Proportion of males in total population	...	50.4
" foreign-born	...	9.8
" foreign parentage	...	33.8
" colored	...	6.6
" illiterate	...	3.2
" male wage-earners (15–over)	...	31.4
" ages under 5	...	8.1
" ages 5–19	...	27.0
" ages 20–64	...	60.7
" ages 65–over	...	3.3
" ages unknown	...	0.9
Mean maximum temperature	61°	...
" minimum temperature	44°	...
" relative humidity	...	72.6
Average death-rate 1900–04	11.6	

MORTALITY OF COLUMBUS, OHIO, 1881–1904.

	Population.	Deaths.	Rate per 1,000.
1871	32,881		
1872	34,571		
1873	36,348		
1874	38,216		
1875	40,180		
1876	42,245		
1877	44,416		
1878	46,699		
1879	49,099		
1880	51,647		
1881	54,482	931	17.1
1882	57,473	830	14.4
1883	60,628	916	15.1
1884	63,956	1,059	16.6
1885	67,467	984	14.6
1886	71,171	1,112	15.6
1887	75,078	1,145	15.3
1888	79,200	1,259	15.9
1889	83,548	1,181	14.1
1890	88,150	1,363	15.5
1891	91,323	1,414	15.5
1892	94,611	1,265	13.4
1893	98,017	1,465	14.9
1894	101,546	1,308	12.9
1895	105,202	1,504	14.3
1896	108,989	1,369	12.6
1897	112,913	1,222	10.8
1898	116,978	1,390	11.9
1899	121.189	1,360	11.2
1900	125,560	1,562	12.4
1901	130,080	1,547	11.9
1902	134,762	2,100	15.6
1903	139,613	2,287	16.4
1904	144,639	2,081	14.4

WORCESTER, MASS.

Latitude, 42° 16′; longitude, 71° 48′. Elevation, 475 feet.

		Per Cent.
Land area, in acres	23,683	...
Population in 1900	118,421	...
Density per acre	5.0	...
Rate of annual increase of population	...	4.0
Proportion of males in total population	...	49.9
" foreign-born	...	31.8
" foreign parentage	...	67.6
" colored	...	1.0
" illiterate	...	4.9
" male wage-earners (15–over)	...	48.7
" ages under 5	...	10.5
" ages 5–19	...	26.6
" ages 20–64	...	58.9
" ages 65–over	...	3.9
" ages unknown	...	0.1
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	16.0	

MORTALITY OF WORCESTER, MASS., 1871–1904.

	Population.	Deaths.	Rate per 1,000.
1871	42,630	1,146	26.9
1872	44,211	1,394	31.5
1873	45,851	1,055	23.0
1874	47,552	993	20.9
1875	49,317	1,043	21.1
1876	50,994	1,063	20.8
1877	52,728	1 097	20.8
1878	54,521	948	17.4
1879	56,375	910	16.1
1880	58,291	1,218	20.9
1881	60,180	1,153	19.2
1882	62,130	1,230	19.8
1883	64,143	1,291	20.1
1884	66,221	1,303	19.7
1885	68,389	1,323	19.3
1886	71,371	1,188	16.6
1887	74,483	1,335	17.9
1888	77,731	1,471	18.9
1889	81,120	1,500	18.5
1890	84,655	1,436	17.0
1891	87,305	1,586	18.2
1892	90,038	1,762	19.6
1893	92,856	1,895	20.4
1894	95,762	1,728	18.0
1895	98,767	1,827	18.5
1896	102,421	1,796	17.5
1897	106,210	1,791	16.9
1898	110,140	1,827	16.6
1899	114,215	1,800	15.8
1900	118,421	2,223	18.8
1901	121,798	1,997	16.4
1902	125,175	1,875	15.0
1903	128,552	2,069	16.1
1904	131,929	1,993	15.1

SYRACUSE, N.Y.

Latitude, 43° 3′; longitude, 76° 9′. Elevation, 399 feet.

		Per Cent.
Land area, in acres	10,189	...
Population in 1900	108,374	...
Density per acre	10.6	...
Rate of annual increase of population	...	2.3
Proportion of males in total population	...	48.4
" foreign-born	...	21.9
" foreign parentage	...	58.7
" colored	...	1.0
" illiterate	...	3.2
" male wage-earners (15–over)	...	31.3
" ages under 5	...	9.0
" ages 5–19	...	26.8
" ages 20–64	...	59.7
" ages 65–over	...	4.5
" ages unknown	...	0.0
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	14.1	

MORTALITY OF SYRACUSE, N.Y.,[1] 1884–1904.

	Population.	Deaths.	Rate per 1,000.
1871	44,045		
1872	45,062		
1873	46,103		
1874	47,168		
1875	48,255		
1876	48,943		
1877	49,640		
1878	50,347		
1879	50,964		
1880	51,792		
1881	54,620		
1882	57,602		
1883	60,747		
1884	64,064	1,022	16.0
1885	67,562	1,000	14.8
1886	71,251	1,059	14.9
1887	75,141	1,199	16.0
1888	79,244	1,532	19.3
1889	83,571	1,444	17.3
1890	88,143	1,616	18.3
1891	89,978	1,554	17.3
1892	91,850	1,660	18.1
1893	93,751	1,721	18.4
1894	95,702	1,548	16.2
1895	97,694	1,558	15.9
1896	99,727	1,579	15.8
1897	101,802	1,711	16.8
1898	103,920	1,633	15.7
1899	106,083	1,470	13.9
1900	108,374	1,548	14.3
1901	110,629	1,544	14.0
1902	112,931	1,506	13.3
1903	115,281	1,605	13.9
1904	117,679	1,750	14.9

NEW HAVEN, CONN.

Latitude, 41° 18′; longitude, 72° 55′. Elevation, 10 feet.

		Per Cent.
Land area, in acres	11,460	...
Population in 1900	108,027	...
Density per acre	9.4	...
Rate of annual increase of population	...	3.3
Proportion of males in total population	...	49.8
" foreign-born	...	28.5
" foreign parentage	...	63.8
" colored	...	2.8
" illiterate	...	5.6
" male wage-earners (15–over)	...	40.1
" ages under 5	...	10.4
" ages 5–19	...	26.4
" ages 20–64	...	58.8
" ages 65–over	...	4.3
" ages unknown	...	0.1
Mean maximum temperature	58°	...
" minimum temperature	41°	...
" relative humidity	...	75.9
Average death-rate 1900–04	17.1	

MORTALITY OF NEW HAVEN, CONN., 1872–1904.

	Population.	Deaths.	Rate per 1,000.
1871	51,933		
1872	53,050	1,272	24.0
1873	54,191	1,277	23.6
1874	55,356	1,073	19.4
1875	56,546	1,292	22.8
1876	57,762	1,323	22.9
1877	59,004	1,185	20.1
1878	60,273	1,079	17.9
1879	61,569	1,062	17.2
1880	62,882	1,181	18.8
1881	64,517	1,261	19.5
1882	66,194	1,343	20.3
1883	67,915	1,378	20.3
1884	69,681	1,369	19.6
1885	71,493	1,395	19.5
1886	73,352	1,392	19.0
1887	75,259	1,444	19.2
1888	77,216	1,594	20.6
1889	79,224	1,489	18.8
1890	81,298	1,742	21.4
1891	83,739	1,677	20.0
1892	86,151	1,780	20.7
1893	88,633	2,037	23.0
1894	91,187	1,717	18.8
1895	93,813	1,890	20.1
1896	96,514	2,019	20.9
1897	99,294	1,768	17.8
1898	102,154	1,843	18.0
1899	105,096	1,717	16.3
1900	108,027	1,963	18.2
1901	111,138	1,974	17.8
1902	114,338	1,869	16.3
1903	117,630	1,941	16.5
1904	121,017	2,016	16.7

PATERSON, N.J.

Latitude, 40° 45′; longitude, 74° 10′. Elevation, 82 feet.

		Per Cent.
Land area, in acres	5,357	...
Population in 1900	105,171	...
Density per acre	19.6	...
Rate of annual increase of population	...	3.4
Proportion of males in total population	...	49.3
" foreign-born	...	36.9
" foreign parentage	...	76.2
" colored	...	1.2
" illiterate	...	6.3
" male wage-earners (15-over)	...	54.4
" ages under 5	...	11.3
" ages 5-19	...	29.5
" ages 20-64	...	56.0
" ages 65-over	...	3.2
" ages unknown	...	0.0
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900-04	17.2	...

MORTALITY OF PATERSON, N.J., 1879-1904.

	Population.	Deaths.	Rate per 1,000.
1871	34,566		
1872	35,583		
1873	36,629		
1874	37,706		
1875	38,814		
1876	40,999		
1877	43,307		
1878	45,745		
1879	48,320	994	20.6
1880	51,031	1,174	23.0
1881	53,290	1,161	21.8
1882	55,635	1,511	27.2
1883	58,083	1,415	24.4
1884	60,639	1,446	23.8
1885	63,273	1,284	20.3
1886	66,038	1,100	16.7
1887	68,924	1,402	20.3
1888	71,936	1,719	23.9
1889	75,080	1,682	22.4
1890	78,347	1,714	21.9
1891	81,822	1,867	22.8
1892	85,451	1,908	22.3
1893	89,241	1.836	20.6
1894	93,199	1,836	19.7
1895	97,344	1,777	18.3
1896	98,838	1,944	19.7
1897	100,458	1,963	19.5
1898	102,000	1,728	16.9
1899	103,566	2,211	21.3
1900	105,171	1,967	18.7
1901	106,785	1,871	17.5
1902	108,424	1,773	16.4
1903	110,088	1,730	15.7
1904	111,777	1,988	17.8

FALL RIVER, MASS.

Latitude, 41° 42′; longitude, 71° 9′. Elevation, 200 feet.

		Per Cent.
Land area, in acres	21,582	...
Population in 1900	104,863	...
Density per acre	4.9	...
Rate of annual increase of population	...	4.1
Proportion of males in total population	...	47.9
" foreign-born	...	47.7
" foreign parentage	...	86.1
" colored	...	0.4
" illiterate	...	14.9
" male wage-earners (15-over)	...	53.2
" ages under 5	...	12.0
" ages under 5-19	...	31.7
" ages 20-64	...	53.4
" ages 65-over	...	2.8
" ages unknown	...	0.1
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900-04	19.3	...

MORTALITY OF FALL RIVER, MASS., 1871-1904.

	Population.	Deaths.	Rate per 1,000.
1871	29,742	603	20.3
1872	33,049	990	30.0
1873	36,724	1,264	34.4
1874	40,808	1,083	26.5
1875	45,340	1,088	24.0
1876	46,043	1,025	22.3
1877	46,757	1,058	22.6
1878	47,482	1,054	22.2
1879	48,218	1,117	23.2
1880	48,961	1,290	26.3
1881	50,449	1,251	24.8
1882	51,983	1,342	25.8
1883	53,563	1,265	23.6
1884	55,191	1,368	24.8
1885	56,870	1,280	22.5
1886	60,009	1,255	20.9
1887	63,321	1,457	23.0
1888	66,816	1,541	23.0
1889	70,504	1,508	21.4
1890	74,398	1,705	22.9
1891	77,151	1,914	24.8
1892	80,006	1,986	24.8
1893	82,966	2,048	24.7
1894	86,036	2,049	23.8
1895	89,203	1,945	21.8
1896	92,133	2,291	24.9
1897	95,160	2,207	23.2
1898	98,286	1,917	19.5
1899	101,515	2,157	21.2
1900	104,863	2,258	21.5
1901	108,308	1,987	18.4
1902	111,866	2,210	19.9
1903	115,540	2,290	19.8
1904	119,335	2,047	17.2

ST. JOSEPH, MO.

Latitude, 39° 48′; longitude, 94° 52′. Elevation, 825 feet.

		Per Cent.
Land area, in acres	6,173	...
Population in 1900	102,979	...
Density per acre	16.7	...
Rate of annual increase of population	...	9.7
Proportion of males in total population	...	55.0
" foreign-born	...	8.2
" foreign parentage	...	27.1
" colored	...	6.1
" illiterate	...	2.1
" male wage-earners (15–over)	...	12.3
" ages under 5	...	9.5
" ages 5–19	...	30.2
" ages 20–64	...	58.0
" ages 65–over	...	2.1
" ages unknown	...	0.2
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	6.9	...

MORTALITY OF ST. JOSEPH, MO., 1900–1904.

	Population.	Deaths.	Rate per 1,000.
1871	20,578		
1872	21,643		
1873	22,764		
1874	23,941		
1875	25,180		
1876	26,484		
1877	27,856		
1878	29,299		
1879	30,816		
1880	32,431		
1881	34,020		
1882	35,687		
1883	37,436		
1884	39,260		
1885	41,184		
1886	43,202		
1887	45,319		
1888	47,540		
1889	49,869		
1890	52,324		
1891	57,390		
1892	62,456		
1893	67,522		
1894	72,588		
1895	77,654		
1896	82,720		
1897	87,786		
1898	92,852		
1899	97,918		
1900	102,979	708	6.9
1901	108,045	695	6.4
1902	113,111	819	7.2
1903	118,177	767	6.5
1904	123,243	914	7.4

OMAHA, NEB.

Latitude, 41° 17′; longitude, 95° 58′. Elevation, 1,034 ft.

		Per Cent.
Land area, in acres	15,080	...
Population in 1900	102,555	...
Density per acre	6.8	...
Rate of annual decrease of population	...	2.7
Proportion of males in total population	...	52.7
" foreign-born	...	23.0
" foreign parentage	...	55.0
" colored	...	3.5
" illiterate	...	2.0
" male wage-earners (15–over)	...	15.6
" ages under 5	...	9.1
" ages 5–19	...	27.6
" ages 20–64	...	60.8
" 65–over	...	2.4
" ages unknown	...	0.1
Mean maximum temperature	60°	...
" minimum temperature	41°	...
" relative humidity	...	69.2
Average death-rate 1900–04	10.6	...

MORTALITY OF OMAHA, NEB., 1890–1904.

	Population.	Deaths.	Rate per 1,000.
1871	17,151		
1872	18,290		
1873	19,504		
1874	20,769		
1875	22,148		
1876	23,619		
1877	25,187		
1878	26,859		
1879	28,642		
1880	30,518		
1881	35,549		
1882	41,409		
1883	48,236		
1884	56,188		
1885	65,451		
1886	76,241		
1887	88,809		
1888	103,349		
1889	120,386		
1890	140,452*	1,235	8.8
1891	136,226	1,345	9.9
1892	131,996	1,199	9.1
1893	127,897	1,204	9.4
1894	123,925	1,149	9.3
1895	120,077	1,122	9.3
1896	116,348	929	8.0
1897	112,735	960	8.5
1898	109,234	943	8.6
1899	105,842	1,187	11.2
1900	102,555	999	9.7
1901	99,273	993	10.0
1902	96,190	1,050	10.9
1903	93,244	966	10.4
1904	90,348	1,108	12.3

* Defective Census returns invalidate all estimates of population.

LOS ANGELES, CAL.

Latitude, 33° 47′; longitude, 117° 57′. Elevation, 268 feet.

		Per Cent.
Land area, in acres	27,399	...
Population in 1900	102,479	...
Density per acre	3.7	...
Rate of annual increase of population	...	10.3
Proportion of males in total population	...	49.3
" foreign-born	...	19.5
" foreign parentage	...	45.2
" colored	...	4.3
" illiterate	...	2.3
" male wage-earners (15–over)	...	17.1
" ages under 5	...	7.6
" ages 5–19	...	26.0
" ages 20–64	...	61.3
" ages 65–over	...	4.4
" ages unknown	...	0.7
Mean maximum temperature	74°	...
" minimum temperature	51°	...
" relative humidity	...	71.7
Average death-rate 1900–04	19.7	...

MORTALITY OF LOS ANGELES, CAL., 1879–1904.

	Population.	Deaths.	Rate per 1,000.
1871	6,124		
1872	6,548		
1873	7,001		
1874	7,485		
1875	8,003		
1876	8,557		
1877	9,148		
1878	9,781		
1879	10,458	128	12.2
1880	11,183	265	23.7
1881	13,000	263	20.2
1882	15,113	411	27.2
1883	17,569	451	25.7
1884	20,424	413	20.2
1885	23,743	568	23.9
1886	27,601	547	19.8
1887	32,086	688	21.4
1888	37,300	676	18.1
1889	43,361	751	17.3
1890	50,395	846	16.8
1891	54,102	831	15.4
1892	58,081	945	16.3
1893	62,353	954	15.3
1894	66,939		
1895	71,862		
1896	77,147		
1897	82,821		
1898	88,912		
1899	95,451	1,628	17.1
1900	102,479	1,744	16.7
1901	110,006	1,962	17.8
1902	118,096	2,315	19.6
1903	126,781	2,697	21.3
1904	136,105	2,975	21.9

MEMPHIS, TENN.

Latitude, 35° 9′; longitude, 90° 3′. Elevation, 227 feet.

		Per Cent.
Land area, in acres	9,822	...
Population in 1900, white	52,380	...
Population in 1900, colored	49,940	...
Density per acre	10.4	...
Rate of annual increase of population, white	...	4.6
Rate of annual increase of population, colored	...	7.4
Proportion of males in total population, white	...	52.9
Proportion of males in total population, colored	...	49.2
Proportion of foreign born, etc., see next page.		
Mean maximum temperature	70°	...
" minimum temperature	53°	...
" relative humidity	...	... 71.8
Annual average death-rate 1900–04 (white)	16.8	...

MORTALITY OF MEMPHIS, TENN. (WHITE), 1876–1904.

	Population.	Deaths.	Rate per 1,000.
1871	24,057		
1872	23,388		
1873	22,738		
1874	22,106		
1875	21,591		
1876	20,980	665	31.7
1877	20,392	644	31.6
1878	19,815	2,427	122.5
1879	19,250	832	43.2
1880	18,677	472	25.2
1881	19,950	665	33.3
1882	21,289	420	20.7
1883	22,717	610	26.9
1884	24,240	756	31.2
1885	25,866	666	25.7
1886	27,601	676	24.5
1887	29,453	673	22.8
1888	31,428	768	24.4
1889	33,536	670	20.1
1890	35,789	651	18.2
1891	37,178	698	18.8
1892	38,621	634	16.4
1893	40,120	537	13.4
1894	41,677	549	13.2
1895	43,295	696	16.1
1896	44,976	629	14.0
1897	46,722	620	13.3
1898	48,536	615	12.7
1899	50,420	942	18.7
1900	52,380	998	19.1
1901	54,417	882	16.2
1902	56,533	865	15.3
1903	58,732	931	15.8
1904	61,016	1,071	17.6

MEMPHIS, TENN.—*Continued.*

		Per Cent.	
Proportion of	foreign-born	5.0	
"	foreign parentage	15.5	
"	colored	49.9	
"	illiterate, white	2.1	
"	illiterate, colored	35.1	
"	male wage-earners (15-over)	20.6	
		White.	*Colored.*
"	ages under 5	9.7	9.2
"	ages 5–19	27.9	29.2
"	ages 20–64	59.7	59.4
"	ages 65–over	2.3	2.0
"	ages unknown	0.4	0.2

MORTALITY OF MEMPHIS, TENN.
(COLORED).
1876–1904.

	Population.	Deaths.	Rate per 1,000.
1871	15,451		
1872	15,414		
1873	15,371		
1874	15,322		
1875	15,169		
1876	15,124	610	40.3
1877	15,067	613	40.7
1878	15,010	1,539	102.5
1879	14,953	757	50.6
1880	14,915	479	32.2
1881	15,906	806	50.7
1882	16,984	701	41.3
1883	18,136	793	43.7
1884	19,366	921	47.6
1885	20,679	818	39.6
1886	22,081	749	33.9
1887	23,578	796	33.8
1888	25,177	809	32.1
1889	26,884	682	25.4
1890	28,729	723	25.2
1891	30,340	791	26.1
1892	32,067	716	22.3
1893	33,893	698	20.6
1894	35,823	741	20.7
1895	37,862	773	20.4
1896	40,017	719	18.0
1897	42,295	704	16.7
1898	44,703	754	16.9
1899	47,248	1,210	25.6
1900	49,940	1,144	22.9
1901	52,735	1,044	19.8
1902	55,679	1,094	19.6
1903	58,779	1,101	18.7
1904	62,045	1,239	20.0

SCRANTON, PA.

Latitude, 41° 24′; longitude, 75° 40′. Elevation, 724 feet.

		Per Cent.
Land area, in acres	12,233	...
Population in 1900	102,026	...
Density per acre	8.3	...
Rate of annual increase of population	...	3.6
Proportion of males in total population	...	50.2
" foreign-born	...	28.4
" foreign parentage	...	72.7
" colored	...	0.5
" illiterate	...	8.8
" male wage-earners (15–over)	...	26.0
" ages under 5	...	12.3
" ages 5–19	...	31.6
" ages 20–64	...	53.5
" ages 65–over	...	2.4
" ages unknown	...	0.2
Mean maximum temperature	...	...
" minimum temperature	...	...
" relative humidity	...	...
Average death-rate 1900–04	15.7	...

MORTALITY OF SCRANTON, PA., 1890–1904.

	Population.	Deaths.	Rate per 1,000.
1871	36,043		
1872	37,020		
1873	38,023		
1874	39,053		
1875	40,111		
1876	41,198		
1877	42,314		
1878	43,461		
1879	44,639		
1880	45,850		
1881	48,175		
1882	50,617		
1883	53,183		
1884	55,879		
1885	58,712		
1886	61,689		
1887	64,817		
1888	68,001		
1889	71,449		
1890	75,215	1,643	21.8
1891	77,547	1,355	17.5
1892	79,951	1,437	18.0
1893	82,429	1,468	17.8
1894	84,984	1,495	17.6
1895	87,619	1,592	18.2
1896	90,335	1,600	17.7
1897	93,135	1,750	18.8
1898	96,002	1,498	15.6
1899	98,999	1,593	16.1
1900	102,026	1,811	17.8
1901	105,188	1,732	16.5
1902	108,448	1,498	13.8
1903	111,809	1,592	14.2
1904	115,275	1,878	16.3

NOTE.

In compiling the mortality of American cities, many discrepancies occur, and it is often entirely a matter of personal judgment which statistics should be accepted. Sometimes the mortality of a given locality is reported by different authorities, as is the case in New Jersey and Massachusetts, and sometimes discrepancies occur in the different tables of a given report. In the preceding tables the returns are believed to be as accurate as any available; and, if, as a result of their publication in this convenient form, corrections and additions shall be made in the future by health officers or others in authority, the practical value of this investigation will be materially enhanced. Regarding the more important discrepancies or variations in the returns, I add the following notes:—

Boston, Mass. The mortality of Boston has been derived from the Massachusetts State Registration Reports. The returns differ slightly from those given in a summary table on p. 314 of the Report of the Boston City Registry Department for 1904.

Detroit, Mich. The mortality record of this city is very unsatisfactory. The frequent changes in the dates on which the statistical year is made to end makes a reliable comparison of the mortality from year to year almost impossible. The deaths for 1897 were obtained by correspondence, and the deaths for 1898 to 1904 have been derived from the Monthly Bulletins of the State Department of Vital Statistics.

Fall River, Mass. The mortality for Fall River has been derived from the State Registration Reports of Massachusetts. The deaths for the earlier years of the period considered were necessarily from that source, and to make the returns comparable the later statistics have also been compiled from the State Reports, although for certain years they have been published in the annual reports of the local Board of Health. The statistics in the latter report sometimes differ considerably from those found in the State Registration Reports. In 1901, for example, the local report gives 2,143 deaths against 1,987 in the State Registration Report.

Jersey City, N.J. The annual report of the local Board of Health of Hudson County for 1904 contains a summary table of the mortality of Jersey City for the period 1875–1904, inclusive. The return

varies from the State Reports (1879–1904), but, upon the assumption that the local record is more complete and accurate, I have used the returns of the Hudson County Board of Health.

Newark, N.J. The mortality from 1871 to 1878, inclusive, has been derived from "Mortality and Sanitary Record of Newark, N.J.," by Edgar Holden, M.D., and is for calendar years. To complete the record, the mortality as returned by the State Board of Health has been accepted for the years 1879–1904. The years 1879 to 1900, inclusive, end June 30, and the years 1901 to 1904 end December 31. The mortality records of Newark as published by the local Health Department and the City Clerk do not agree. Since the report of the City Clerk is used in the summary tables of the State Reports, the State returns have been accepted for the period 1879–1904.

Worcester, Mass. The Annual Report of the Board of Health of Worcester for 1905 contains a summary table of the mortality of the city for the period 1864 to 1904, inclusive. The returns do not, in many instances, agree with the State Registration Reports, nor with those contained in the Annual Reports of the Board of Health. It has been assumed that the summary table is the most accurate statement available.